

Exhibit B

Exhibit B - U.S. Patent No. 8,589,541 (“’541 Patent”)

Accused Instrumentalities: smartphones, basic phones, tablets, laptops, and hotspot devices sold (including those sold in bundles with data plans) or used by T-Mobile and all versions and variations thereof (“Accused Instrumentalities”) since the issuance of U.S. Pat. No. 8,589,541 (the “Asserted Patent”).

Claim 1

Claim	Public Documentation
[1a] A non-transitory computer-readable storage medium storing machine-executable instructions that, when executed by one or more processors of a wireless end-user device, cause the one or more processors to:	<p>The Accused Instrumentalities include “A non-transitory computer-readable storage medium storing machine-executable instructions that, when executed by one or more processors of a wireless end-user device, cause the one or more processors to.”</p> <p>For example, T-Mobile sells and uses devices described by T-Mobile’s website below (e.g., devices made by Samsung, Apple, Motorola, Google, Nokia, etc.). These devices constitute a wireless end-user device as described in claim 1. <i>See, e.g.</i> https://www.t-mobile.com/cell-phones</p>

Claim

Public Documentation

WIRELESSBUSINESSPREPAIDINTERNETTVBANKING

T

PlansPhones & devicesDealsCoverageJoin Us

Find a storeContact & supportCartSearchMy account

Free 2-day shipping. Applied at checkout or call 844-489-9807.

Shop

Phones

Tablets & Devices

Smart watches

Hotspots & more

Accessories

Filters

Deals

Brands

Operating System

Network speed

SIM type


Phones48 items

Sort by: Featured

Get a fast and easy financing decision. (This won't affect your credit score.)

See what I qualify for

See 5 deals



Apple

iPhone 15 Pro

Starting at

Monthly\$41.67

for 24 months before promotion


Today\$0

down + tax

Full price: \$999.99

3.1 (21)

See 5 deals



Apple

iPhone 15 Pro Max

Starting at

Monthly\$50.00

for 24 months before promotion


Today\$0

down + tax

Full price: \$1,199.99

3.7 (29)

See 5 deals



Apple

iPhone 15

Starting at

Monthly\$34.59

for 24 months before promotion


Today\$0

down + tax

Full price: \$829.99

4.0 (11)

See 5 deals



Apple

iPhone 15 Plus

Starting at

Monthly\$38.75

for 24 months before promotion


Today\$0

down + tax

Full price: \$929.99

4.9 (8)

See 4 deals



Apple

iPhone 13

Starting at

Monthly\$26.25

for 24 months before promotion


Today\$0

down + tax

Full price: \$629.99

4.3 (3)

See 5 deals



Apple

iPhone 14 Pro

Starting at

Monthly\$37.50

for 24 months before promotion

Today\$99.99

down + tax

Full price: \$999.99

3.8 (42)

IF YOU CANCEL WIRELESS SERVICE, REMAINING BALANCE ON DEVICE BECOMES DUE. For well qualified buyers. 0% APR. Qualifying service req'd

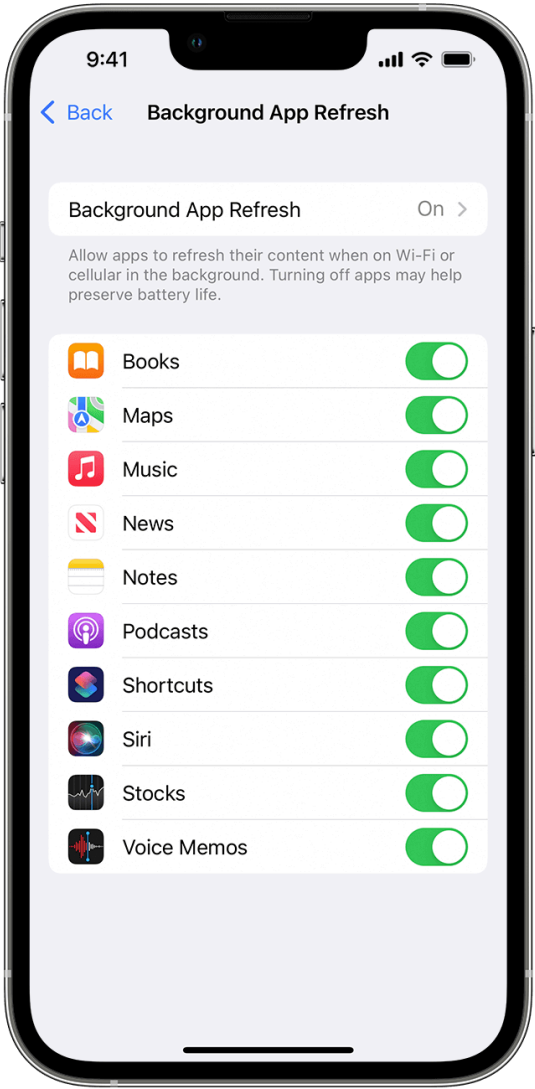
Help me choose

Want to add service?



Page 3 of 148

Claim	Public Documentation
	<div><div><div>Capacity¹</div><div><div>128GB</div><div>256GB</div><div>512GB</div><div>1TB</div></div><div><div>256GB</div><div>512GB</div><div>1TB</div></div></div></div> <p>For further example, the Apple iPhone 15 Pro model has a A17 Pro Chip. <i>See, e.g.,</i> https://www.apple.com/iphone-15-pro/specs/</p> <div><div>Chip</div><div><div>A17 PRO</div></div><div><div>A17 Pro chip</div><div>New 6-core CPU with 2 performance and 4 efficiency cores</div><div>New 6-core GPU</div><div>New 16-core Neural Engine</div></div></div>
[1b] identify a service usage activity of the wireless end-user device, the service usage activity being associated with a first software component of a plurality of software components on the wireless end-user device, the service usage activity comprising one or more prospective or successful communications over a wireless network;	<p>The Accused Instrumentalities “identify a service usage activity of the wireless end-user device, the service usage activity being associated with a first software component of a plurality of software components on the wireless end-user device, the service usage activity comprising one or more prospective or successful communications over a wireless network.”</p> <p>For example, at least Apple’s “Background App Refresh” and “Low Power Mode” settings apply to at least some service usage activities associated with a software component comprising prospective or successful communications over a wireless network. <i>See, e.g.,</i> https://www.t-mobile.com/support/tutorials/device/apple/iphone-xr/topic/apps-amp-accessories/how-to-check-data-usage-per-app-and-change-settings/7</p>

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div></div>

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

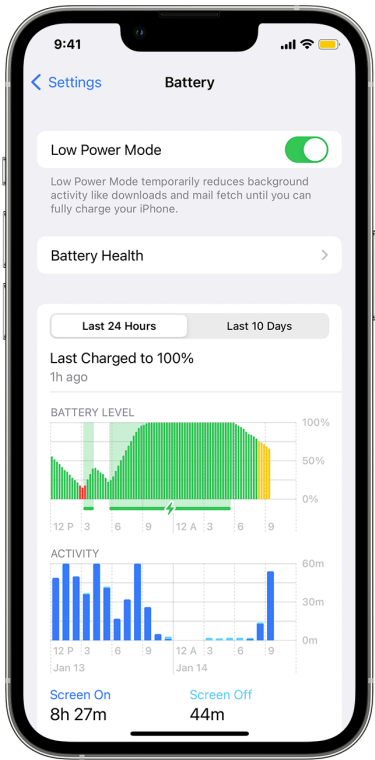
To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

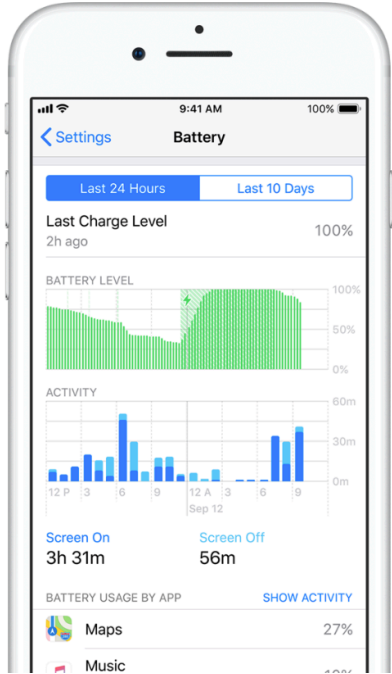
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

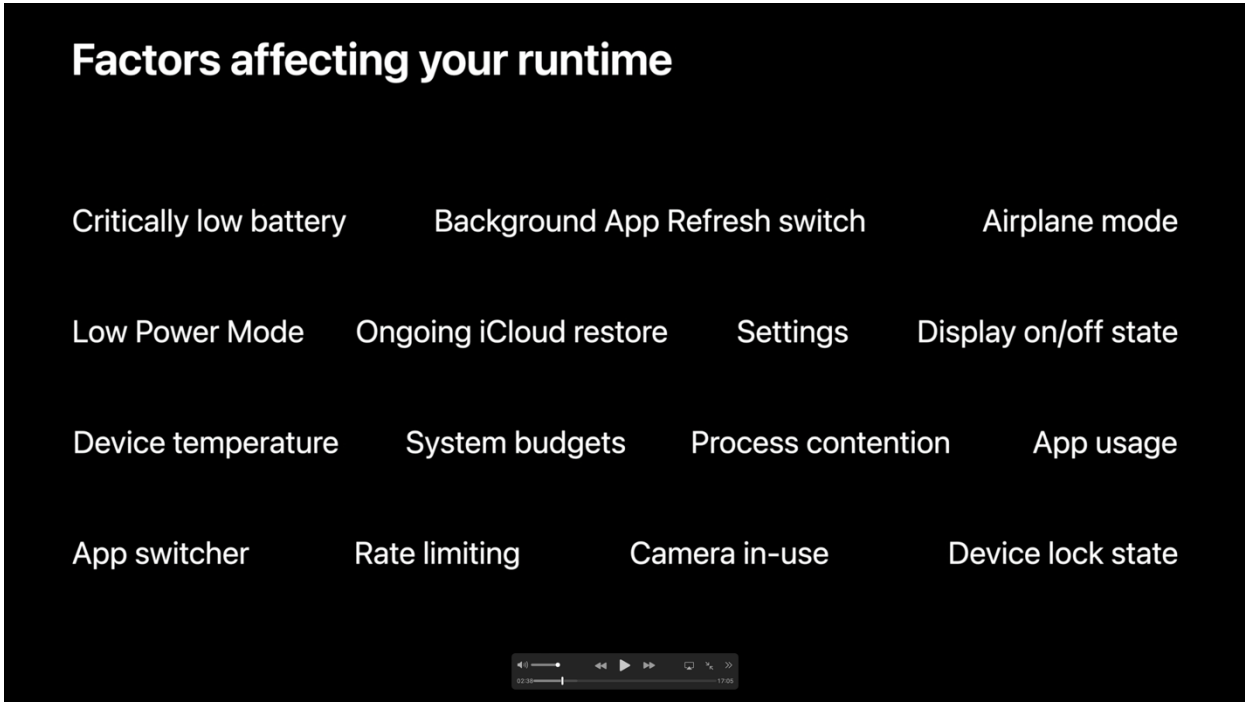









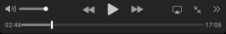
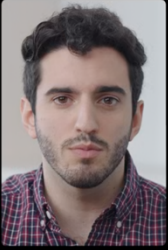
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

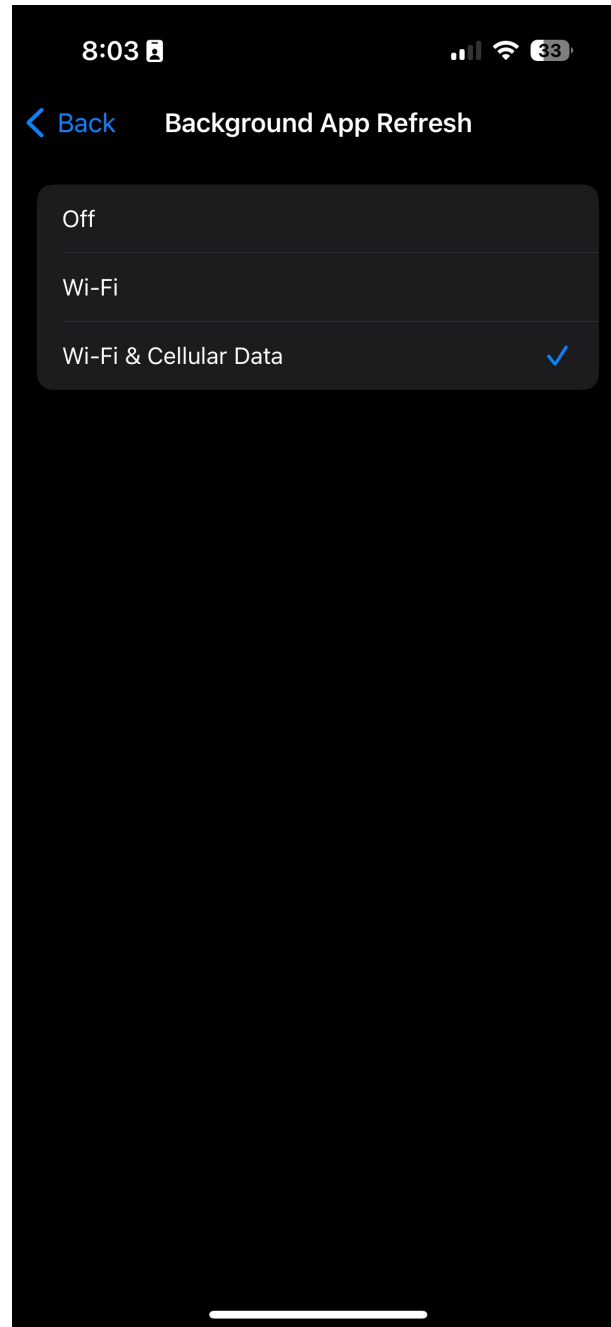
2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.


Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none">• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely.• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/; https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/prepar-</p>

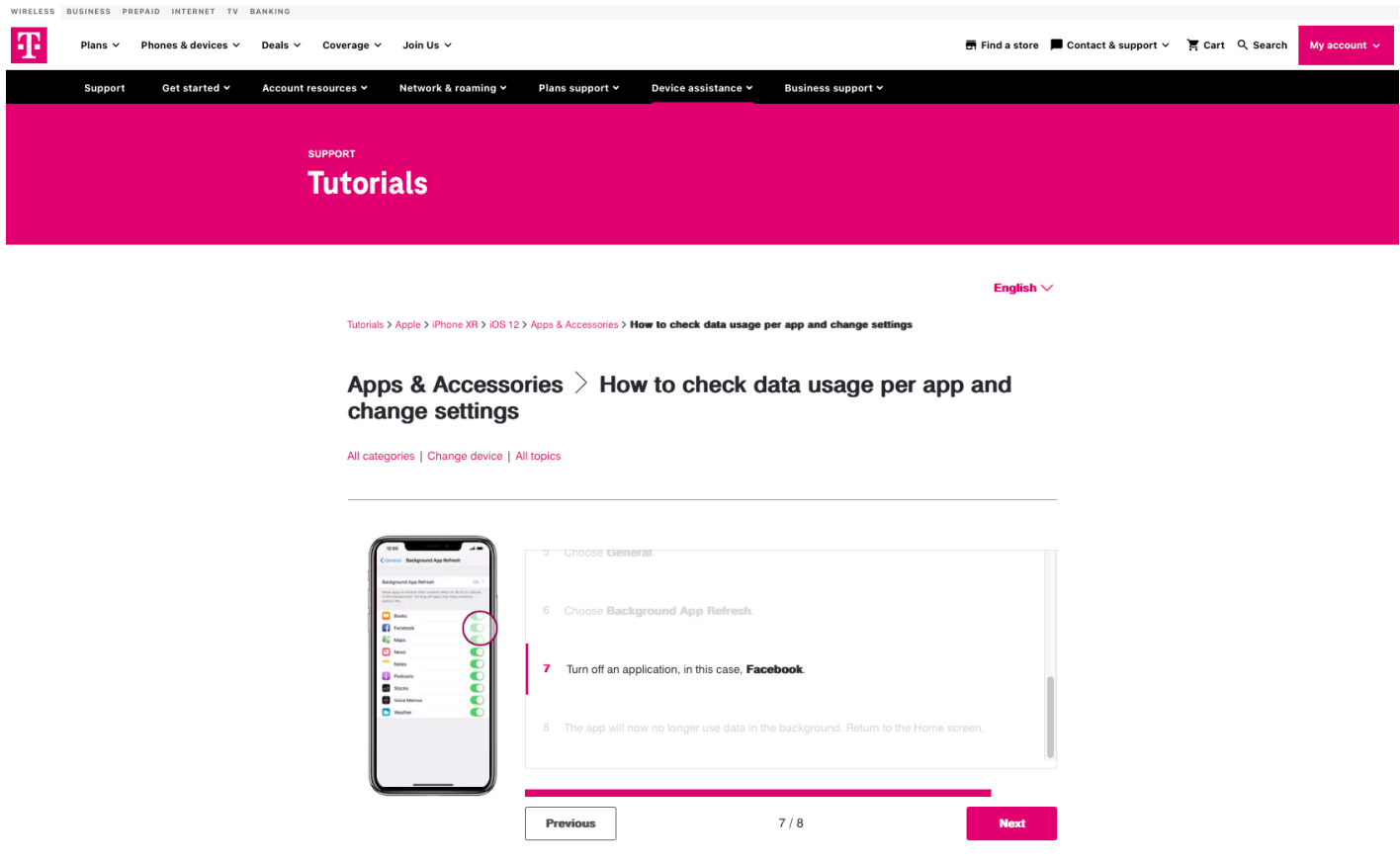
Claim	Public Documentation
	<p> ing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask; https://developer.apple.com/documentation/backgroundtasks/bgtask; backgroundfetchintervalminimum/; backgroundrefreshstatus/; https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate/; https://developer.apple.com/documentation/uikit/uiapplication/state/; https://developer.apple.com/documentation/foundation/url_loading_system/; https://developer.apple.com/documentation/foundation/urlsession/; https://developer.apple.com/documentation/devicemanagement/mail/; https://developer.apple.com/documentation/security/secure_transport/using_the_secure_socket_layer_for_network_communication/; https://developer.apple.com/documentation/networkextension/personal_vpn/; https://developer.apple.com/documentation/foundation/nsproxy/; https://developer.apple.com/documentation/messages/; https://developer.apple.com/documentation/avfoundation/avplayer/; https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback/; https://developer.apple.com/videos/play/wwdc2019/707/; https://developer.apple.com/videos/play/wwdc2020/10063/; </p>

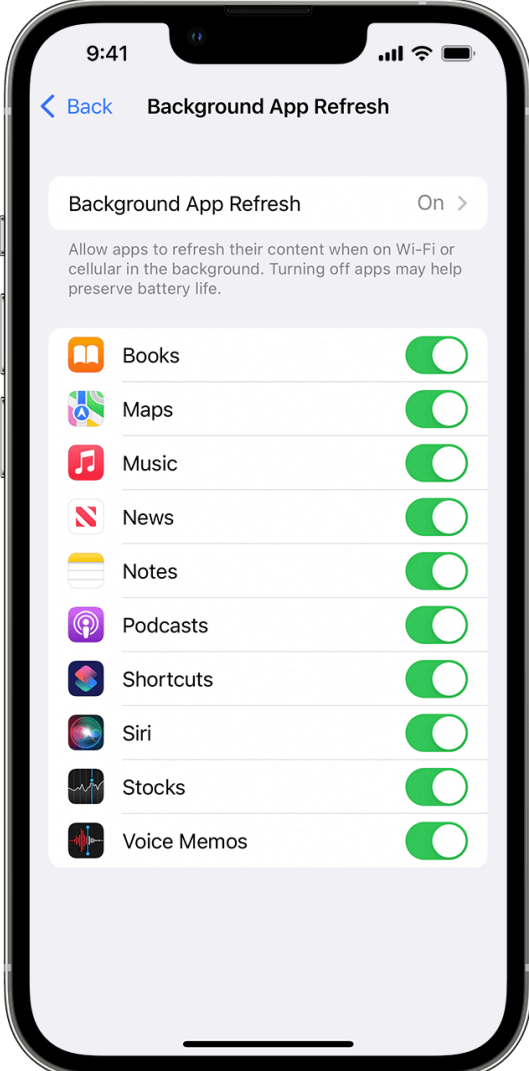
Claim	Public Documentation
	 <p>The screenshot shows a video player interface with a black background and white text. The title 'Factors affecting your runtime' is at the top. Below it, there are four rows of factors, each with four items:</p> <ul style="list-style-type: none">Row 1: Critically low battery, Background App Refresh switch, Airplane modeRow 2: Low Power Mode, Ongoing iCloud restore, Settings, Display on/off stateRow 3: Device temperature, System budgets, Process contention, App usageRow 4: App switcher, Rate limiting, Camera in-use, Device lock state <p>At the bottom of the video frame, there is a playback control bar showing a progress bar at 32:28 and a total duration of 17:08.</p>

Claim	Public Documentation
	<div><h3>Top factors</h3><ul style="list-style-type: none"> Critically low battery Low Power Mode App usage App switcher Background App Refresh switch System budgets Rate limiting</div> <p>; see also exemplary screen shots below:</p>



Claim	Public Documentation
	 <p>The image shows three Apple Watch screens side-by-side. The first screen is the 'Settings' menu, showing options for General, Do Not Disturb, and Airplane Mode. The second screen is the 'General' settings page, showing options for Software Update, Orientation, Background App Refresh, and Wake Screen. The third screen is the 'Background App Refresh' settings page, showing a toggle switch for Background App Refresh, which is currently turned off. Below the toggle, there is a note: 'Turning off Background App Refresh may preserve battery life. Apps with complications on the current watch face will continue to refresh, even when their background app refresh setting is off.'</p> <p>See also, e.g., https://www.t-mobile.com/cell-phone-plans; https://www.t-mobile.com/cell-phone-plans/affordable-data-plans; https://www.t-mobile.com/business?INTNAV=tNav%3ABusiness; https://prepaid.t-mobile.com; https://www.t-mobile.com/cell-phone-plans/international-roaming-plans; https://www.t-mobile.com/support/coverage/domestic-roaming-data; https://www.t-mobile.com/customers/unlimited-roaming-sms-data.</p>
<p>[1c] determine whether the service usage activity comprises a background activity;</p>	<p>The Accused Instrumentalities “determine whether the service usage activity comprises a background activity.”</p> <p>For example, Apple’s devices, including the iPhone 15 Pro, run the Apple iOS Operating System, which comprise at least Apple’s “Background App Refresh” and “Low Power Mode” determine whether the service usage activity comprises background or foreground activity. See also, e.g., https://www.t-mobile.com/support/tutorials/device/apple/iphone-xr/topic/apps-amp-accessories/how-to-check-data-usage-per-app-and-change-settings/7</p>

Claim	Public Documentation
	 <p>The screenshot displays the AT&T Support website. At the top, there is a navigation bar with links for WIRELESS, BUSINESS, PREPAID, INTERNET, TV, and BANKING. Below this is a secondary navigation bar with links for Plans, Phones & devices, Deals, Coverage, and Join Us. A search bar and a 'My account' link are also present. The main content area features a large pink banner with the word 'Tutorials'. Below the banner, there is a breadcrumb trail: Tutorials > Apple > iPhone XR > iOS 12 > Apps & Accessories > How to check data usage per app and change settings. The title of the tutorial is 'Apps & Accessories > How to check data usage per app and change settings'. Below the title, there are links for 'All categories', 'Change device', and 'All topics'. The tutorial content is divided into two columns. The left column shows a screenshot of an iPhone screen with the 'Background App Refresh' settings. The right column shows a screenshot of the 'Choose GENERAL' screen. The steps are numbered 6 and 7. Step 6 says 'Choose Background App Refresh.' and step 7 says 'Turn off an application, in this case, Facebook.' At the bottom of the tutorial, there are 'Previous' and 'Next' buttons, and a page indicator '7 / 8'.</p> <p>; https://support.apple.com/en-us/HT202070;</p>

Claim	Public Documentation																						
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar displays '9:41' and signal strength. The navigation bar has a blue back arrow and the title 'Background App Refresh'. Below the title, there is a toggle switch for 'Background App Refresh' which is turned 'On'. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below this, a list of apps is shown with their respective background refresh toggles turned on:</p><table border="1"><thead><tr><th>App</th><th>Toggle</th></tr></thead><tbody><tr><td>Books</td><td>On</td></tr><tr><td>Maps</td><td>On</td></tr><tr><td>Music</td><td>On</td></tr><tr><td>News</td><td>On</td></tr><tr><td>Notes</td><td>On</td></tr><tr><td>Podcasts</td><td>On</td></tr><tr><td>Shortcuts</td><td>On</td></tr><tr><td>Siri</td><td>On</td></tr><tr><td>Stocks</td><td>On</td></tr><tr><td>Voice Memos</td><td>On</td></tr></tbody></table></div>	App	Toggle	Books	On	Maps	On	Music	On	News	On	Notes	On	Podcasts	On	Shortcuts	On	Siri	On	Stocks	On	Voice Memos	On
App	Toggle																						
Books	On																						
Maps	On																						
Music	On																						
News	On																						
Notes	On																						
Podcasts	On																						
Shortcuts	On																						
Siri	On																						
Stocks	On																						
Voice Memos	On																						

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

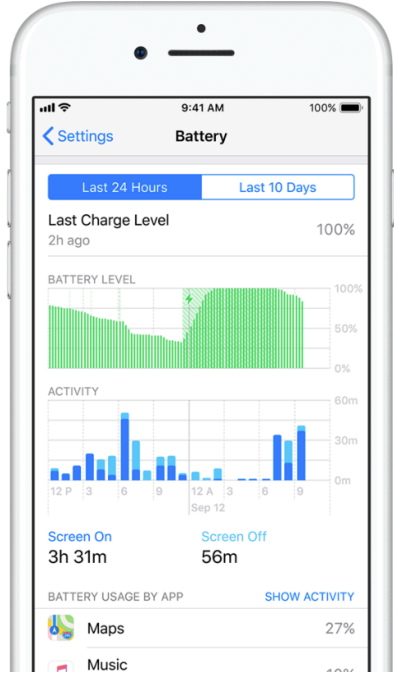
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



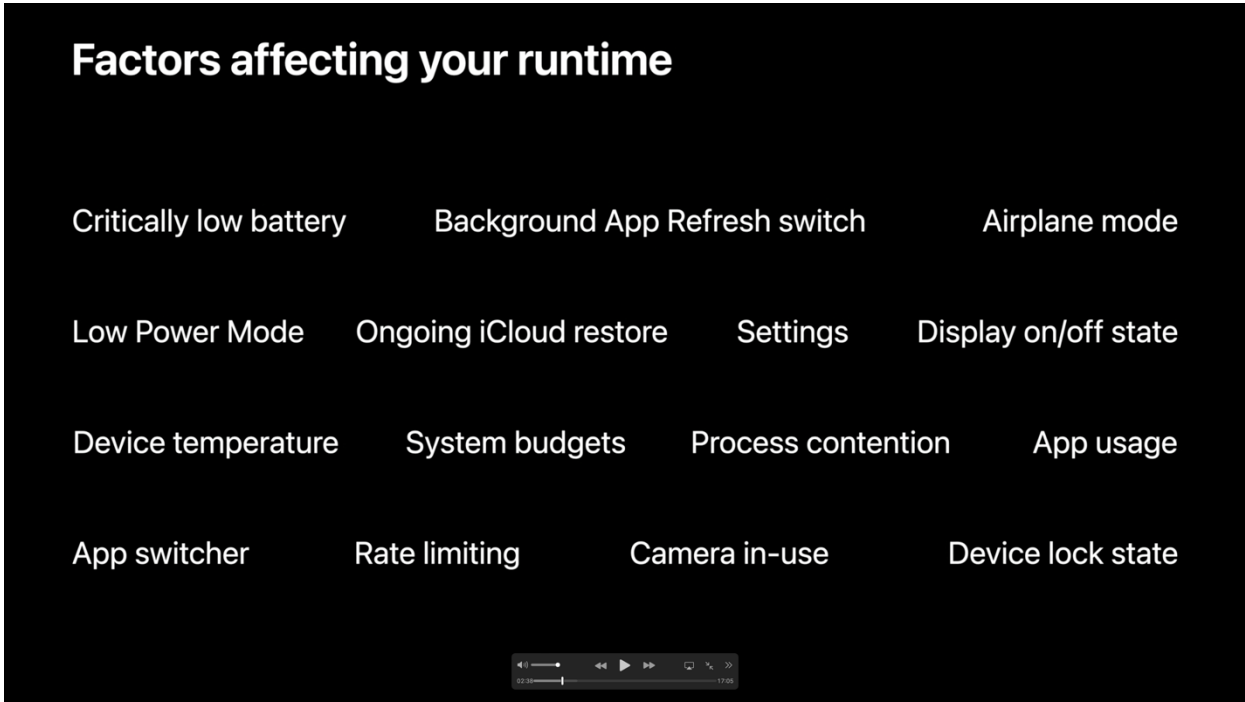
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).









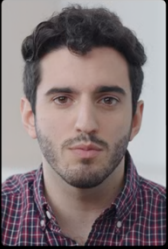
2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate:</p>

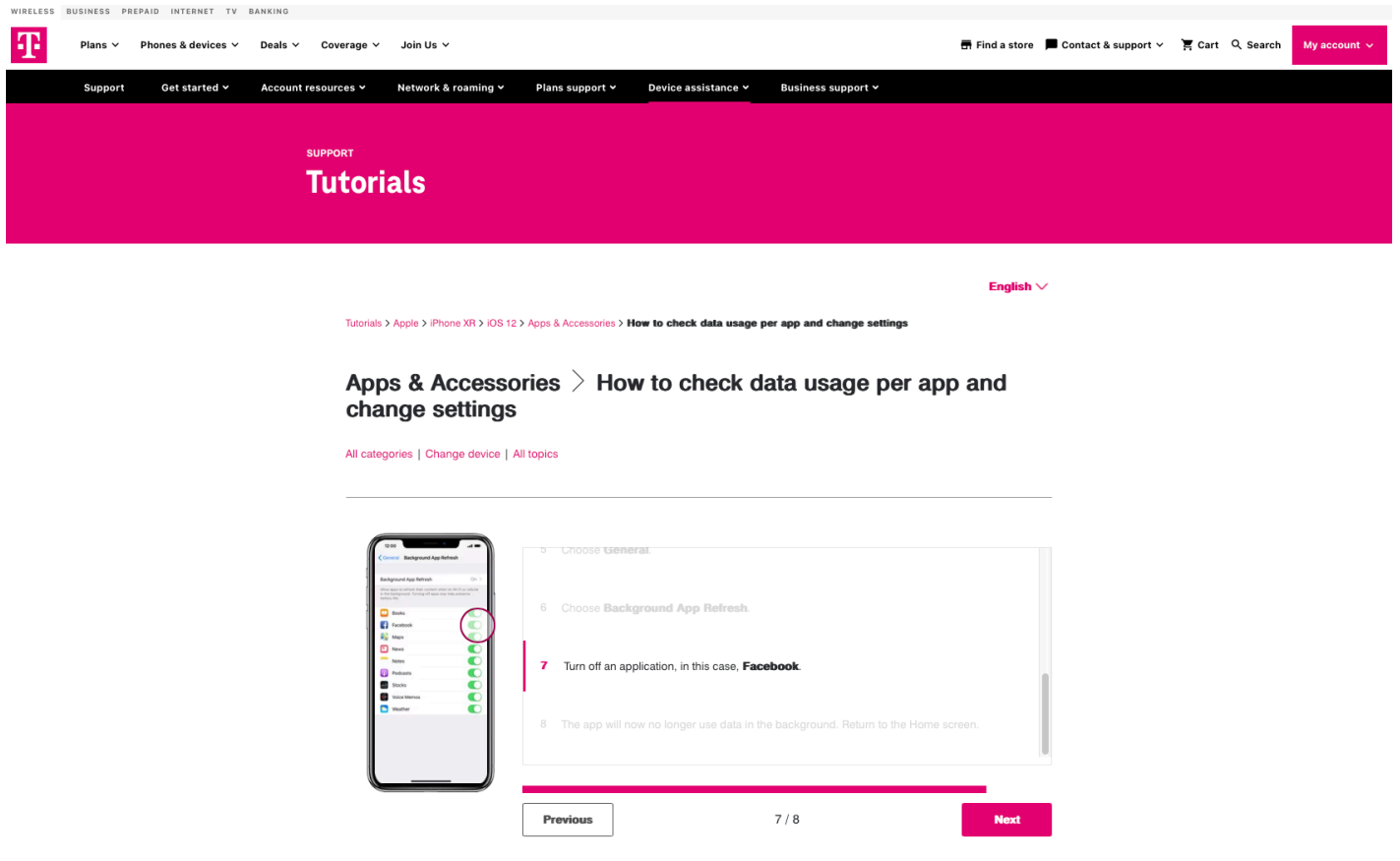
Claim	Public Documentation
	<p>Instance Property</p> <h2>applicationState</h2> <p>The app's current state, or that of its most active scene.</p> <div> iOS 4.0+ iPadOS 4.0+ Mac Catalyst 13.1+ tvOS 9.0+ visionOS 1.0+ Beta </div> <pre>var applicationState: UIApplication.State { get }</pre> <hr/> <h2>Discussion</h2> <p>The behavior of this property depends on whether your app is scene-based.</p> <p>In a scene-based app, this property takes the value of the most active scene, which it determines from each scene's activationState property. A scene-based app launches in the background state, and transitions between its states as scenes connect, change their states, and disconnect. For scene-based apps, use UISceneDelegate to respond to changes in an individual scene's life cycle.</p> <p>In a sceneless app, the property's value is always the app's current state. The app is inactive at launch, and then is generally in either an active or background state. The app may become inactive for a short period — for example, when transitioning between active and background states, when the system presents an alert in front of it, or when the system displays the application switcher. For sceneless apps, use UIApplicationDelegate to respond to the app's life cycle changes.</p> <p>; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/;</p>

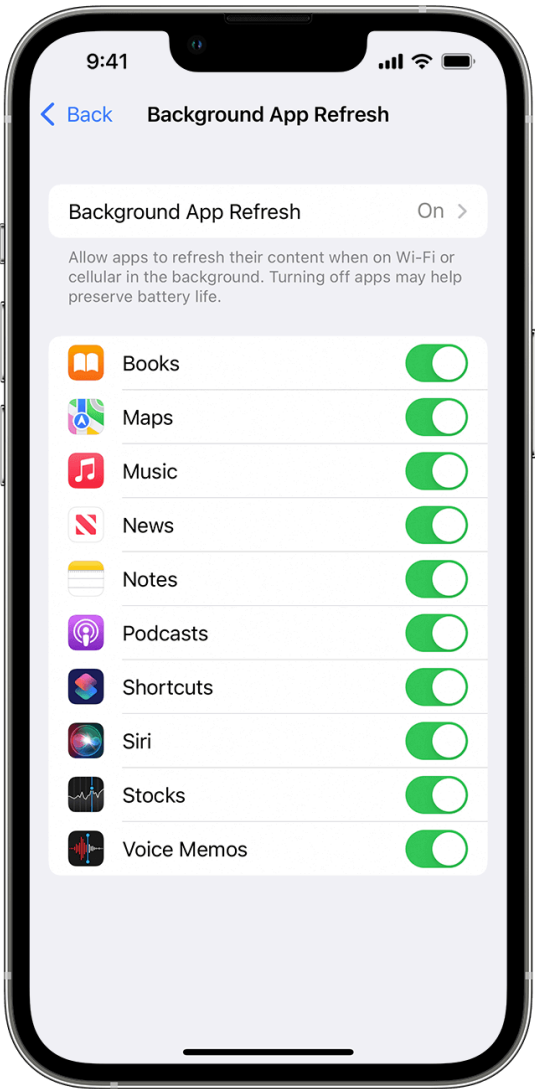
Claim	Public Documentation
	<p>https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask; https://developer.apple.com/documentation/backgroundtasks/bgtask; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_foreground/; https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate; https://developer.apple.com/documentation/uikit/uiapplication/state; https://developer.apple.com/documentation/foundation/url_loading_system; https://developer.apple.com/documentation/foundation/urlsession; https://developer.apple.com/documentation/avfoundation/avplayer; https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback; https://developer.apple.com/videos/play/wwdc2019/707/; https://developer.apple.com/videos/play/wwdc2020/10063;</p>

Claim	Public Documentation
	 <p>The screenshot shows a video player interface with a black background and white text. The title 'Factors affecting your runtime' is at the top. Below it, there are four rows of factors, each with four items:</p> <ul style="list-style-type: none">Row 1: Critically low battery, Background App Refresh switch, Airplane modeRow 2: Low Power Mode, Ongoing iCloud restore, Settings, Display on/off stateRow 3: Device temperature, System budgets, Process contention, App usageRow 4: App switcher, Rate limiting, Camera in-use, Device lock state <p>At the bottom of the video frame, there is a playback control bar showing a progress bar at 32:38 and a total duration of 1:17:05.</p>

Claim	Public Documentation
	<div><h3>Top factors</h3><ul style="list-style-type: none"> Critically low battery Low Power Mode App usage App switcher Background App Refresh switch System budgets Rate limiting</div>

Claim	Public Documentation
	 <p>The image displays three Apple Watch screens side-by-side. The first screen shows the 'Settings' menu with options for General, Do Not Disturb, and Airplane Mode. The second screen shows the 'General' settings menu with options for Software Update, Orientation, Background App Refresh, and Wake Screen. The third screen shows the 'Background App Refresh' settings menu, where the toggle is turned off, and a message states: 'Turning off Background App Refresh may preserve battery life. Apps with complications on the current watch face will continue to refresh, even when their background app refresh setting is off.'</p>
<p>[1d] determine at least an aspect of a policy based on a user input obtained through a user interface of the wireless end-user device or based on information from a network element, the policy to be applied if the service usage activity is the background activity, the policy at least for controlling the service usage activity;</p>	<p>The Accused Instrumentalities “determine at least an aspect of a policy based on a user input obtained through a user interface of the wireless end-user device or based on information from a network element, the policy to be applied if the service usage activity is the background activity, the policy at least for controlling the service usage activity.”</p> <p>For example, Apple’s devices, including the iPhone 15 Pro, comprise an interface which allow users to specify multiple aspects of policies based on user input in various settings (e.g., enabling/disabling Background App Refresh and Low Power Mode as well as enabling/disabling policies for specific applications) controlling service usage activities. <i>See, e.g.,</i> https://www.t-mobile.com/support/tutorials/device/apple/iphone-xr/topic/apps-amp-accessories/how-to-check-data-usage-per-app-and-change-settings/7</p>

Claim	Public Documentation
	 <p>The screenshot displays the AT&T Support website. At the top, there is a navigation bar with links for WIRELESS, BUSINESS, PREPAID, INTERNET, TV, and BANKING. Below this is a secondary navigation bar with links for Plans, Phones & devices, Deals, Coverage, and Join Us. A search bar and a 'My account' link are also present. The main content area features a large pink banner with the word 'Tutorials'. Below the banner, there is a breadcrumb trail: Tutorials > Apple > iPhone XR > iOS 12 > Apps & Accessories > How to check data usage per app and change settings. The title of the tutorial is 'Apps & Accessories > How to check data usage per app and change settings'. Below the title, there are links for 'All categories', 'Change device', and 'All topics'. The tutorial content is divided into two columns. The left column shows a screenshot of an iPhone screen with the 'Background App Refresh' settings. The right column shows a list of steps: 6. Choose Background App Refresh. 7. Turn off an application, in this case, Facebook. 8. The app will now no longer use data in the background. Return to the Home screen. At the bottom of the tutorial, there are 'Previous' and 'Next' buttons, and a page indicator showing 7 / 8.</p> <p>; https://support.apple.com/en-us/HT202070:</p>

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div></div>

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:


- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.













1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

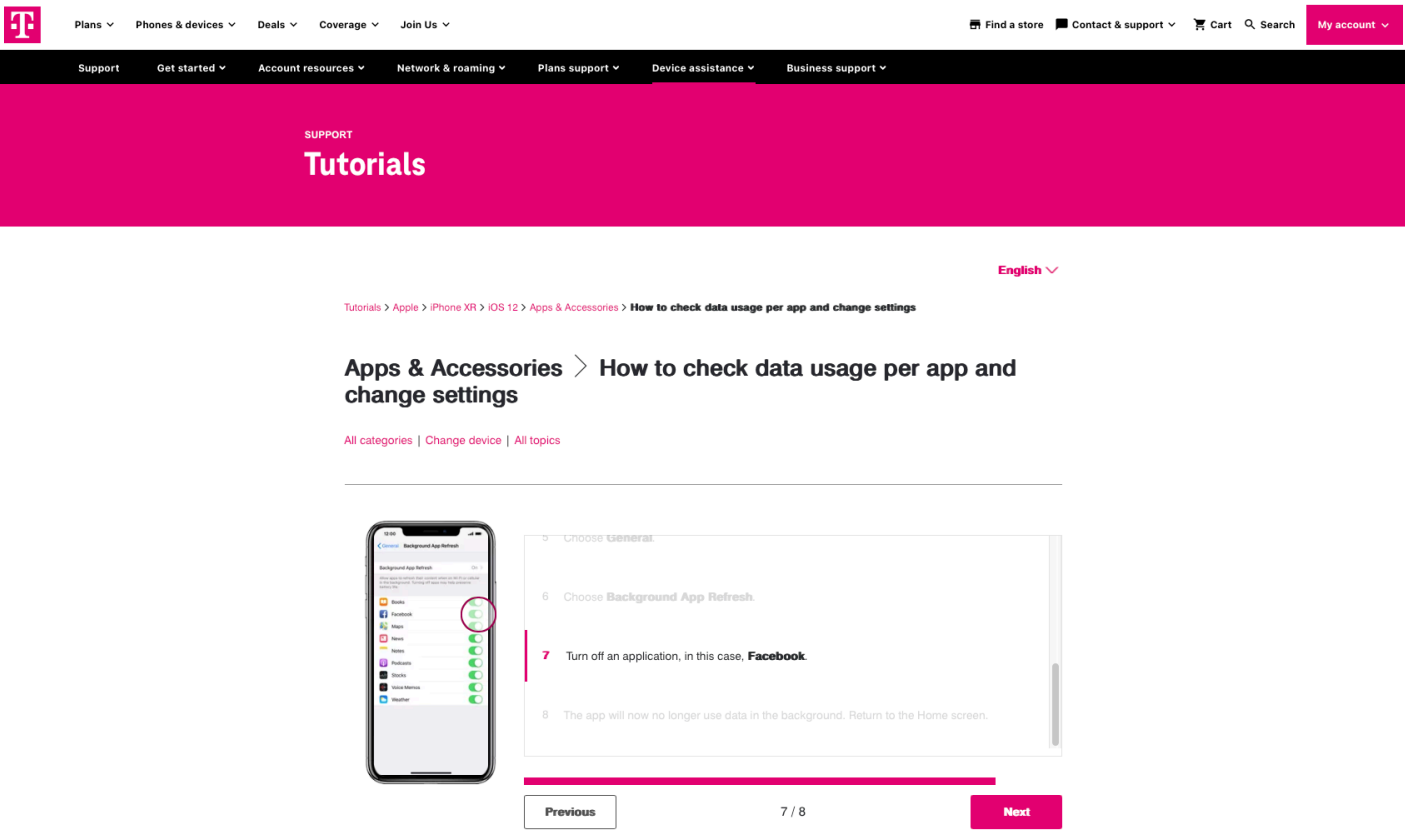
2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

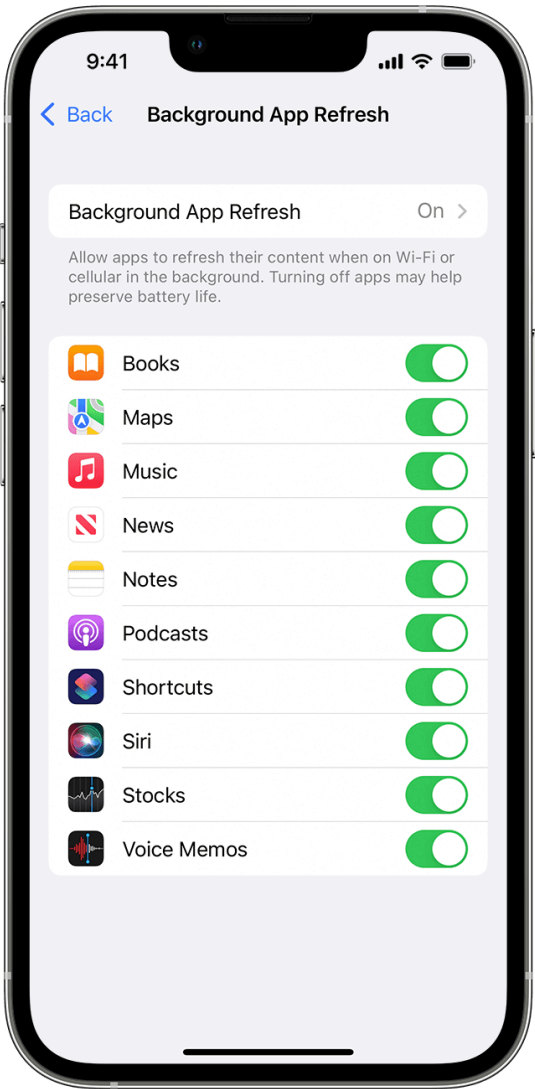
Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/; https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/prepar-</p>

Claim	Public Documentation															
	<p>ing your ui to run in the background/using background tasks to update your app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks/bgappprefreshtask; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask; https://developer.apple.com/documentation/backgroundtasks/bgtask; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/; https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate; https://developer.apple.com/documentation/uikit/uiapplication/state; https://developer.apple.com/documentation/foundation/url_loading_system; https://developer.apple.com/documentation/foundation/urlsession; https://developer.apple.com/documentation/avfoundation/avplayer; https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback/; https://developer.apple.com/videos/play/wwdc2019/707/; https://developer.apple.com/videos/play/wwdc2020/10063/;</p> <div><h2>Factors affecting your runtime</h2><table><tr><td>Critically low battery</td><td>Background App Refresh switch</td><td>Airplane mode</td></tr><tr><td>Low Power Mode</td><td>Ongoing iCloud restore</td><td>Settings</td><td>Display on/off state</td></tr><tr><td>Device temperature</td><td>System budgets</td><td>Process contention</td><td>App usage</td></tr><tr><td>App switcher</td><td>Rate limiting</td><td>Camera in-use</td><td>Device lock state</td></tr></table></div>	Critically low battery	Background App Refresh switch	Airplane mode	Low Power Mode	Ongoing iCloud restore	Settings	Display on/off state	Device temperature	System budgets	Process contention	App usage	App switcher	Rate limiting	Camera in-use	Device lock state
Critically low battery	Background App Refresh switch	Airplane mode														
Low Power Mode	Ongoing iCloud restore	Settings	Display on/off state													
Device temperature	System budgets	Process contention	App usage													
App switcher	Rate limiting	Camera in-use	Device lock state													

Claim	Public Documentation
	<div><h3>Top factors</h3><ul style="list-style-type: none"> Critically low battery Low Power Mode App usage App switcher Background App Refresh switch System budgets Rate limiting</div>

Claim	Public Documentation
	 <p>As yet another example, the Accused Instrumentalities determine aspects of policies based on information from a network element. <i>See also, e.g.,</i> https://www.t-mobile.com/cell-phone-plans; https://www.t-mobile.com/cell-phone-plans/affordable-data-plans; https://www.t-mobile.com/business?INTNAV=tNav%3ABusiness; https://prepaid.t-mobile.com; https://www.t-mobile.com/cell-phone-plans/international-roaming-plans; https://www.t-mobile.com/support/coverage/domestic-roaming-data; https://www.t-mobile.com/customers/unlimited-roaming-sms-data; https://www.t-mobile.com/apps/t-mobile-app; https://www.t-mobile.com/apps/t-mobile-family-mode; https://www.t-mobile.com/support/devices/not-sold-by-t-mobile/byod-t-mobile-data-and-apn-settings; https://www.t-mobile.com/support/tutorials/device/apple/iphone-x/topic/connections-amp-network/apn-and-data-settings.</p>
[1e] and if it is determined that the service usage activity is the background activity, apply the policy.	The Accused Instrumentalities comprise “and if it is determined that the service usage activity is the background activity, apply the policy.”

Claim	Public Documentation
	<p>For example, Apple’s devices, including the iPhone 15 Pro, run the Apple iOS Operating System, which comprise at least Apple’s “Background App Refresh” and “Low Power Mode” settings apply the policy to background service usage activity. <i>See, e.g.,</i> https://www.t-mobile.com/support/tutorials/device/apple/iphone-xr/topic/apps-amp-accessories/how-to-check-data-usage-per-app-and-change-settings/7</p>  <p>The screenshot shows the T-Mobile website's support section. At the top, there's a navigation bar with links like 'Plans', 'Phones & devices', 'Deals', 'Coverage', and 'Join Us'. Below this is a 'SUPPORT' section with a 'Tutorials' link. The tutorial is titled 'Apps & Accessories > How to check data usage per app and change settings'. It includes a list of categories and a list of topics. The tutorial steps are: 1. Open the Settings app. 2. Tap on 'Background App Refresh'. 3. Tap on the toggle switch next to the app you want to turn off. 4. The app will now no longer use data in the background. Return to the Home screen.</p> <p>; https://support.apple.com/en-us/HT202070:</p>

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div></div>

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

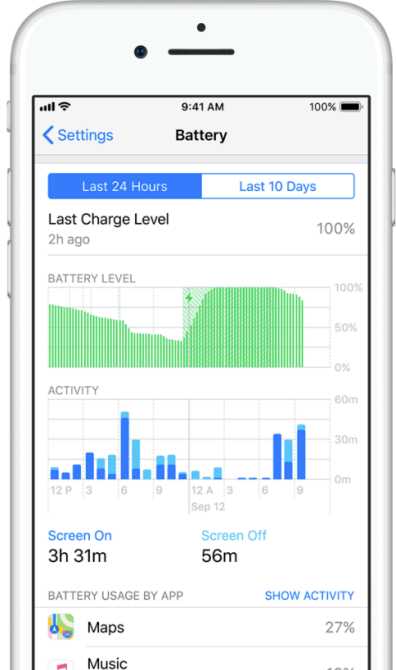
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



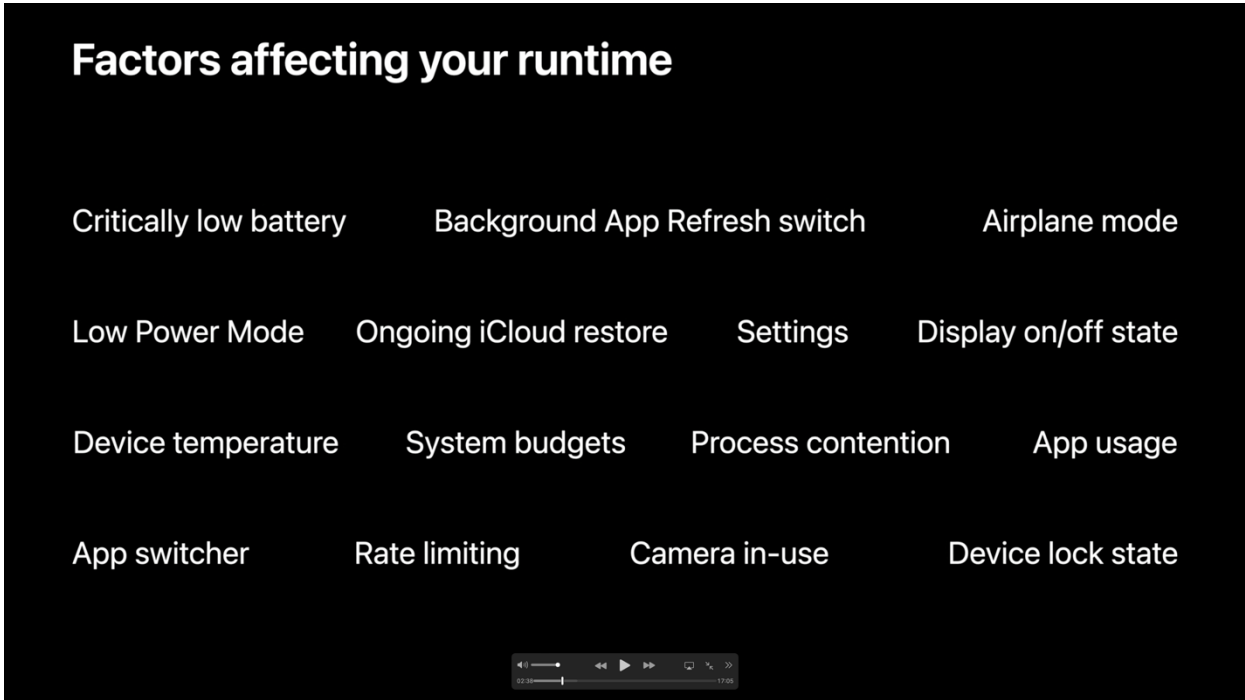
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).










2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.


Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate:</p>

Claim	Public Documentation
	<p>Instance Property</p> <h2>applicationState</h2> <p>The app's current state, or that of its most active scene.</p> <div> iOS 4.0+ iPadOS 4.0+ Mac Catalyst 13.1+ tvOS 9.0+ visionOS 1.0+ Beta </div> <pre>var applicationState: UIApplication.State { get }</pre> <hr/> <h2>Discussion</h2> <p>The behavior of this property depends on whether your app is scene-based.</p> <p>In a scene-based app, this property takes the value of the most active scene, which it determines from each scene's <code>activationState</code> property. A scene-based app launches in the background state, and transitions between its states as scenes connect, change their states, and disconnect. For scene-based apps, use <code>UISceneDelegate</code> to respond to changes in an individual scene's life cycle.</p> <p>In a sceneless app, the property's value is always the app's current state. The app is inactive at launch, and then is generally in either an active or background state. The app may become inactive for a short period — for example, when transitioning between active and background states, when the system presents an alert in front of it, or when the system displays the application switcher. For sceneless apps, use <code>UIApplicationDelegate</code> to respond to the app's life cycle changes.</p> <p>; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/;</p>

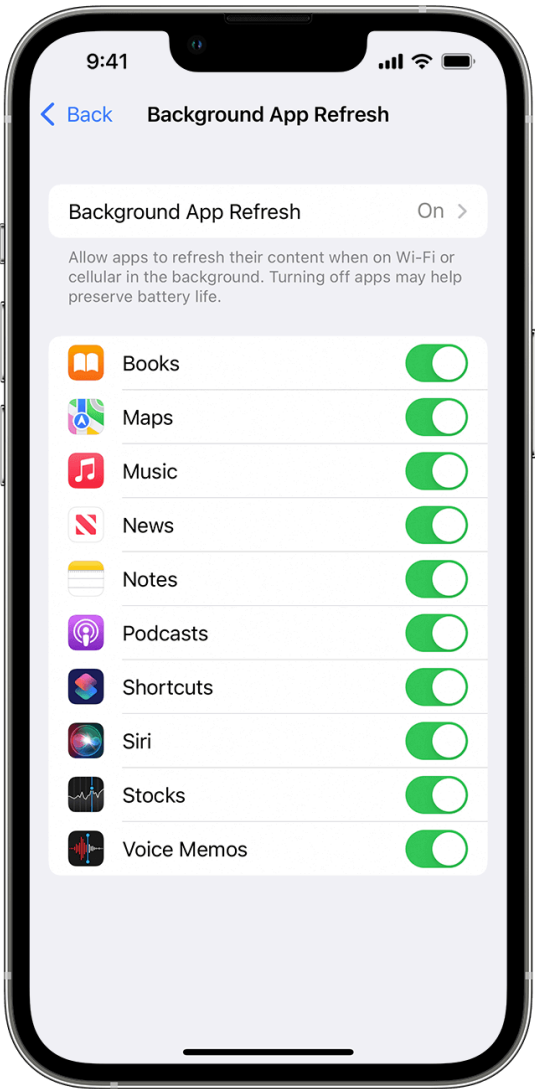
Claim	Public Documentation
	<p>https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your ui to run in the background/using background tasks to update your app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask; https://developer.apple.com/documentation/backgroundtasks/bgtask; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/; https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate; https://developer.apple.com/documentation/uikit/uiapplication/state; https://developer.apple.com/documentation/foundation/url_loading_system; https://developer.apple.com/documentation/foundation/urlsession; https://developer.apple.com/documentation/avfoundation/avplayer; https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback; https://developer.apple.com/videos/play/wwdc2019/707/; https://developer.apple.com/videos/play/wwdc2020/10063:</p>

Claim	Public Documentation
	 <p>The screenshot shows a video player interface with a black background and white text. The title 'Factors affecting your runtime' is at the top. Below it, there are four rows of factors, each with four items:</p> <ul style="list-style-type: none">Row 1: Critically low battery, Background App Refresh switch, Airplane modeRow 2: Low Power Mode, Ongoing iCloud restore, Settings, Display on/off stateRow 3: Device temperature, System budgets, Process contention, App usageRow 4: App switcher, Rate limiting, Camera in-use, Device lock state <p>At the bottom of the video frame, there is a playback control bar showing a progress bar at 32:38 and a total duration of 17:08.</p>

Claim	Public Documentation
	<div><h3>Top factors</h3><ul style="list-style-type: none"> Critically low battery Low Power Mode App usage App switcher Background App Refresh switch System budgets Rate limiting</div>

Claim	Public Documentation
	 <p>The image shows three Apple Watch screens side-by-side. The first screen is the 'Settings' menu, showing options for General, Do Not Disturb, and Airplane Mode. The second screen is the 'General' settings menu, showing options for Software Update, Orientation, Background App Refresh, and Wake Screen. The third screen is the 'Background App Refresh' settings menu, showing a toggle switch for Background App Refresh, which is currently turned off. Below the toggle, there is a warning message: 'Turning off Background App Refresh may preserve battery life. Apps with complications on the current watch face will continue to refresh, even when their background app refresh setting is off.'</p> <p>See also, e.g., https://www.t-mobile.com/cell-phone-plans; https://www.t-mobile.com/cell-phone-plans/affordable-data-plans; https://www.t-mobile.com/business?INTNAV=tNav%3ABusiness; https://prepaid.t-mobile.com; https://www.t-mobile.com/cell-phone-plans/international-roaming-plans; https://www.t-mobile.com/support/coverage/domestic-roaming-data; https://www.t-mobile.com/customers/unlimited-roaming-sms-data.</p>
<p>2. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application component or at least a portion of an operating system component, and</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application component or at least a portion of an operating system component, and wherein the one or more prospective or successful communications over the wireless network comprise an update to the first software component.”</p> <p>See, for example, the disclosures identified for claim 1.</p>

Claim	Public Documentation
wherein the one or more prospective or successful communications over the wireless network comprise an update to the first software component.	As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i> , https://support.apple.com/en-us/HT202070 :

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div></div>

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Low Power Mode reduces or affects these features:

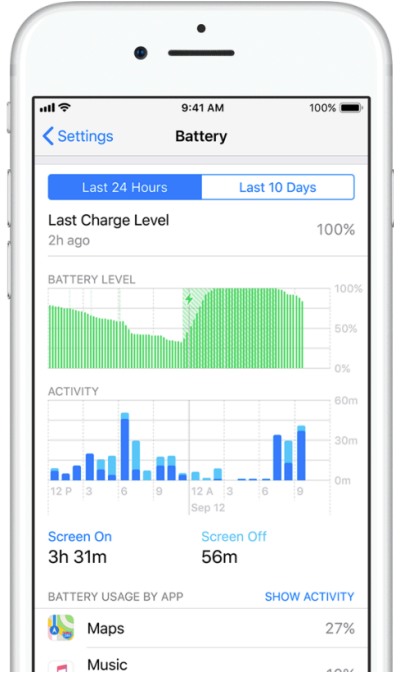
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

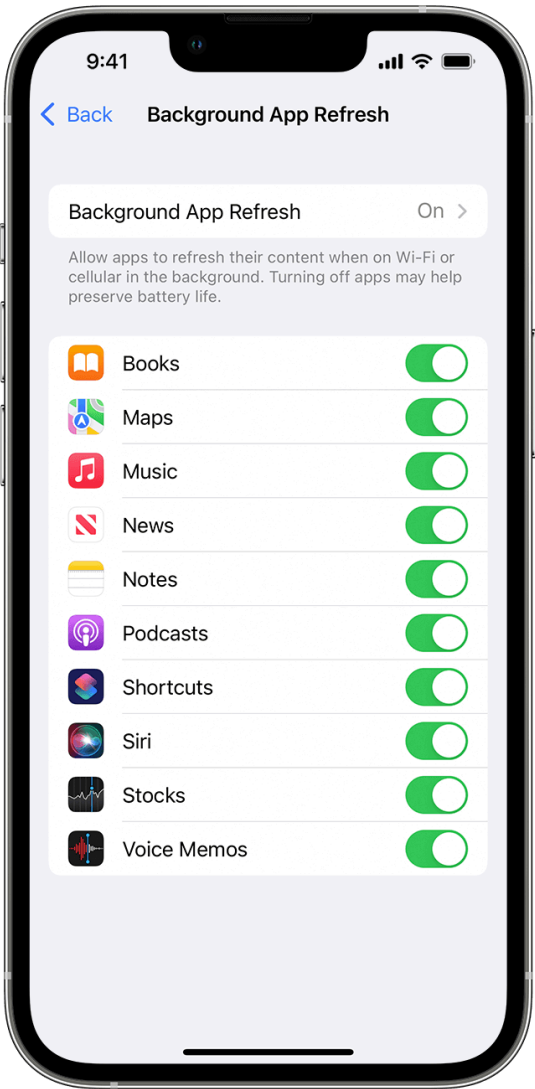


1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/; https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks</p>

Claim	Public Documentation
	https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask ; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask ; https://developer.apple.com/documentation/backgroundtasks/bgtask ; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/ ; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/ .
<p>3. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a network access, background signaling, a cloud synchronization service, an information feed, a download, an e-mail, a chat client, a security update, a peer-to-peer networking application update, a report of a behavior associated with the wireless end-user device, or a combination of these.</p>	<p>The Accused Instrumentalities comprise the “the one or more prospective or successful communications over the wireless network comprise a communication associated with a network access, background signaling, a cloud synchronization service, an information feed, a download, an e-mail, a chat client, a security update, a peer-to-peer networking application update, a report of a behavior associated with the wireless end-user device, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, https://support.apple.com/en-us/HT202070:</p>

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar shows the time as 9:41 and signal strength. The page has a 'Back' button and the title 'Background App Refresh'. Below this, there is a toggle switch for 'Background App Refresh' which is currently turned 'On'. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below the text is a list of ten apps, each with a corresponding icon and a toggle switch that is turned on. The apps listed are: Books, Maps, Music, News, Notes, Podcasts, Shortcuts, Siri, Stocks, and Voice Memos.</p></div>

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

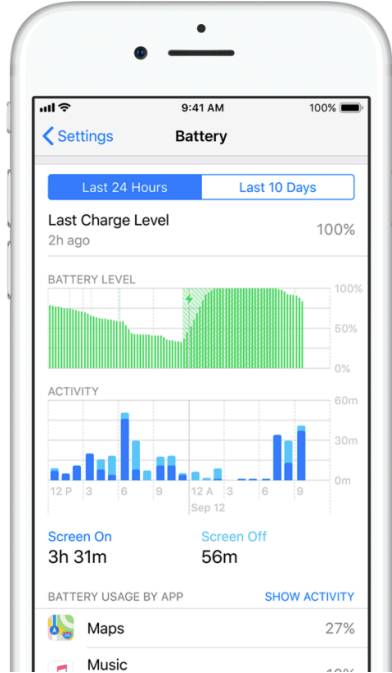
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

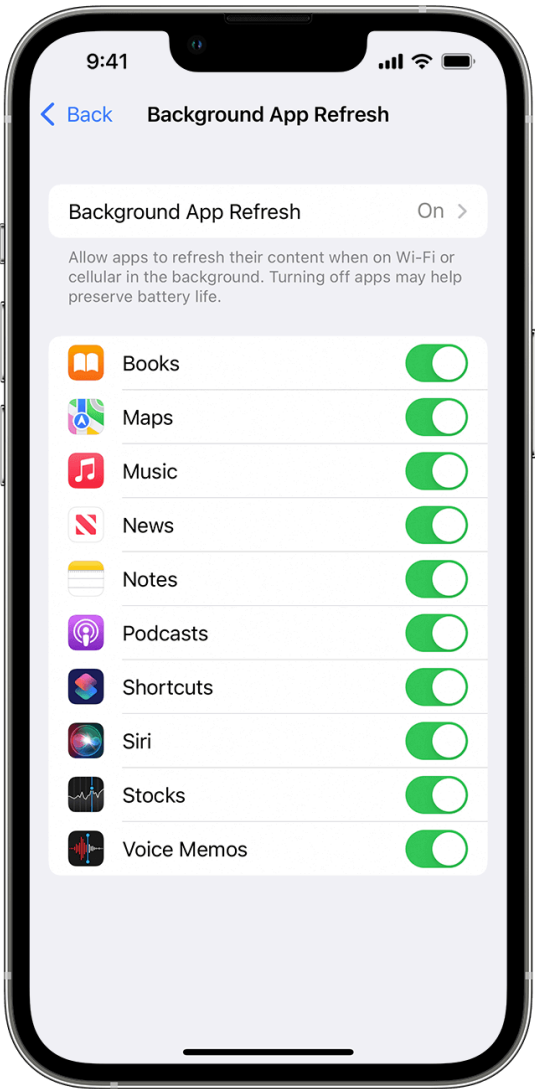
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.



Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/; https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks</p>

Claim	Public Documentation
	https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask ; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask ; https://developer.apple.com/documentation/backgroundtasks/bgtask ; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum ; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus /.
<p>4. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a content update or a content download.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a content update or a content download.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, https://support.apple.com/en-us/HT202070:</p>

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar shows the time as 9:41 and signal strength. The settings page has a 'Back' button and a title 'Background App Refresh' with an 'On' toggle. Below this, a descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' A list of ten apps is shown, each with a green toggle switch turned on: Books, Maps, Music, News, Notes, Podcasts, Shortcuts, Siri, Stocks, and Voice Memos.</p></div>

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

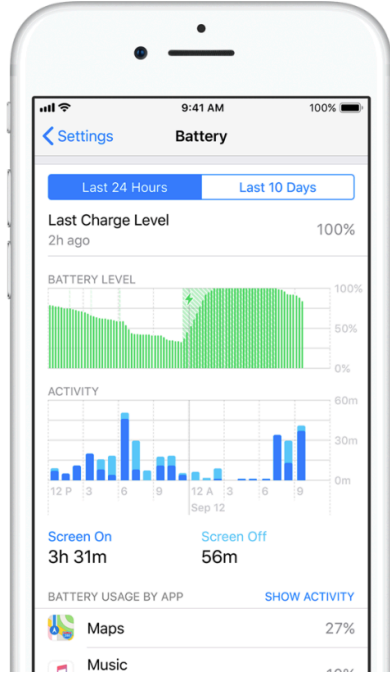
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

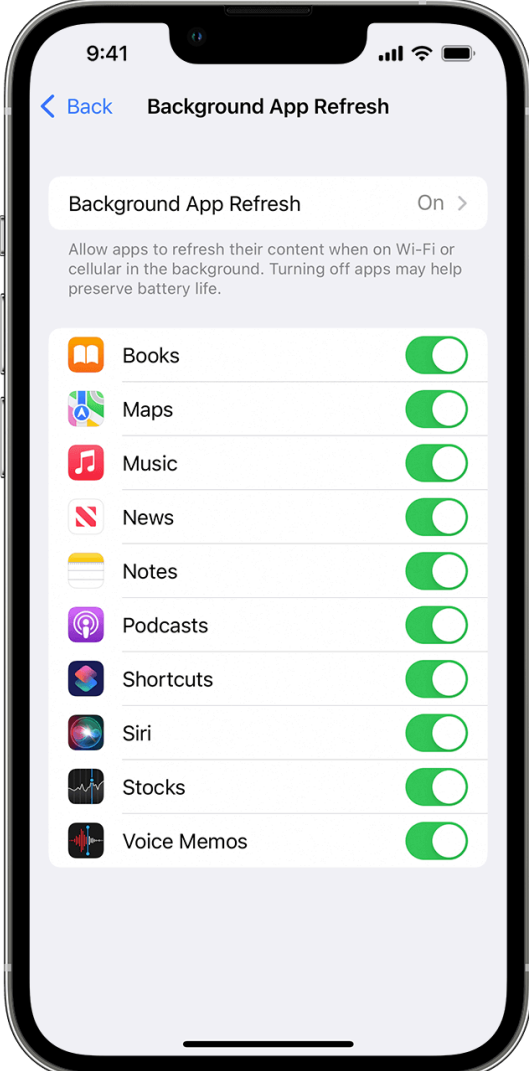
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.



Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/; https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks</p>

Claim	Public Documentation
	https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask ; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask ; https://developer.apple.com/documentation/backgroundtasks/bgtask ; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/ ; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/ .
<p>5. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with an image, music, a video, an electronic book, an e-mail attachment, a content or media subscription, a news feed, a text message, a video chat, or a combination of these.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with an image, music, a video, an electronic book, an e-mail attachment, a content or media subscription, a news feed, a text message, a video chat, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, https://support.apple.com/en-us/HT202070:</p>

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>https://support.apple.com/en-us/HT205234:</p></div> <div></div>

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

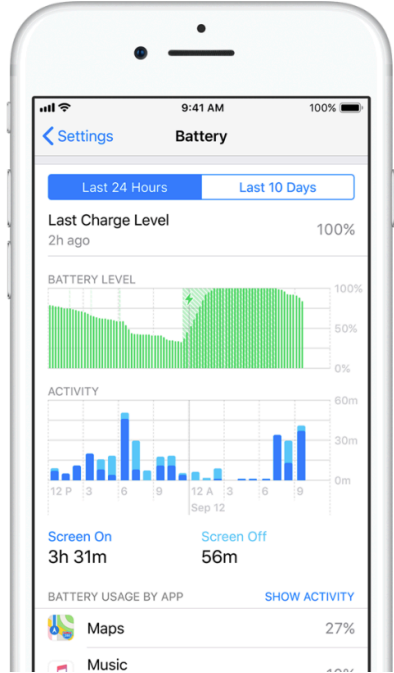
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

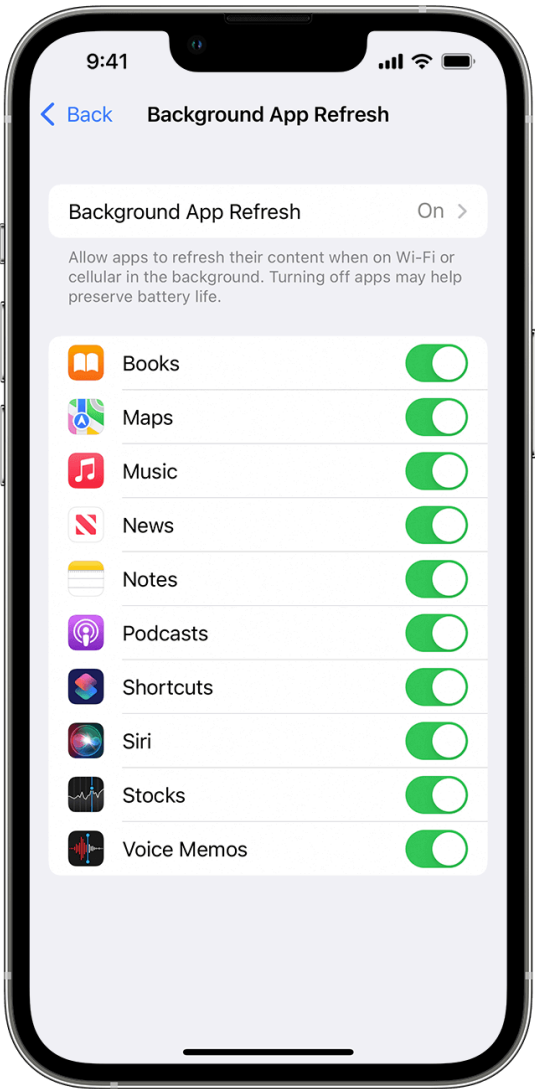
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.



Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/; https://developer.apple.com/documentation/backgroundtasks/; https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/; https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks</p>

Claim	Public Documentation
	<p>https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask; https://developer.apple.com/documentation/backgroundtasks/bgtask; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/.</p>
<p>6. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a device application or widget, a device operating system function, a file download, streaming media, a software update, a firmware update, a website, a connection to a server, a web browser, or a synchronization service.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a device application or widget, a device operating system function, a file download, streaming media, a software update, a firmware update, a website, a connection to a server, a web browser, or a synchronization service.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, https://support.apple.com/en-us/HT202070:</p>

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Low Power Mode reduces or affects these features:


- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
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- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

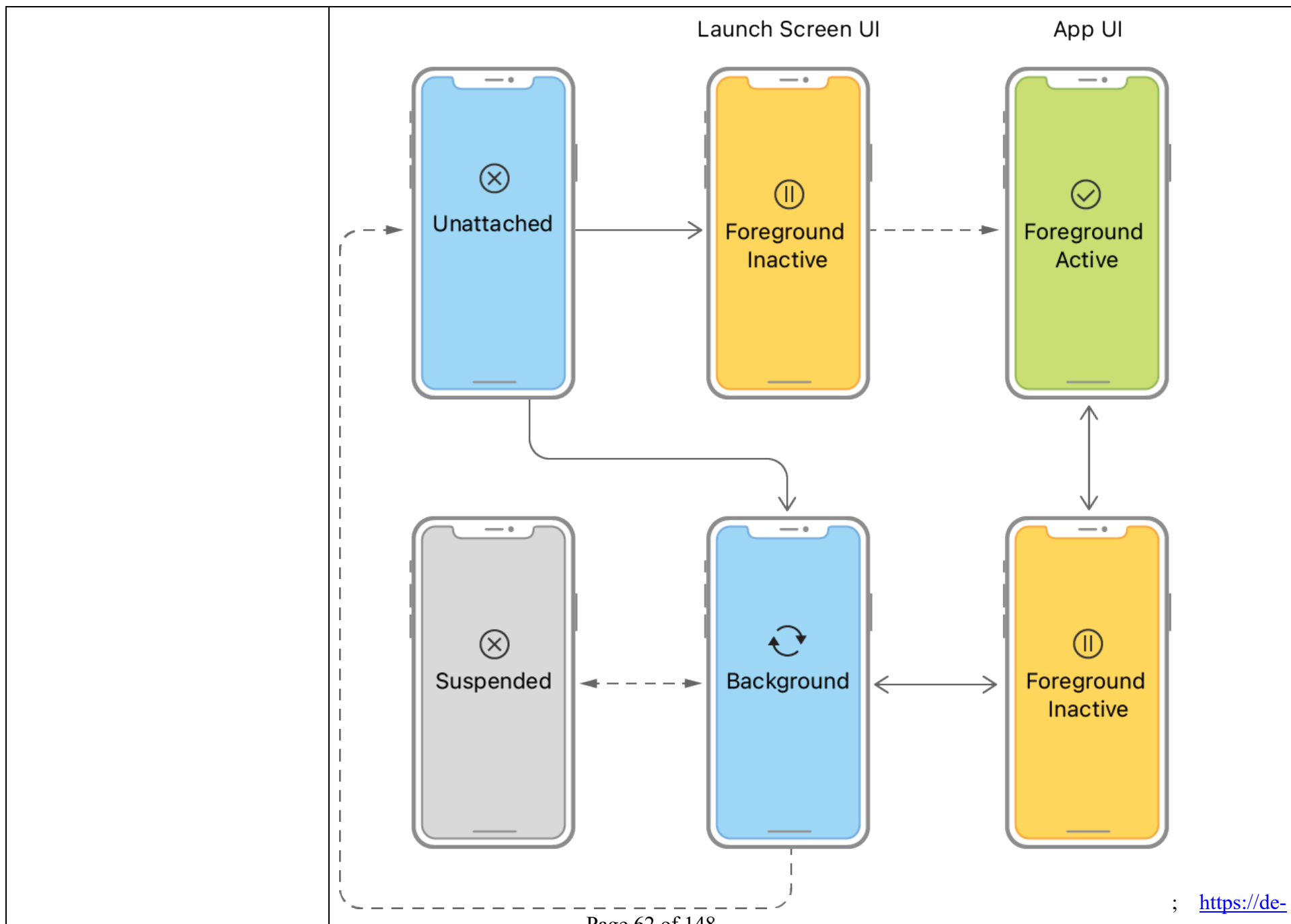
2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
	<p>https://www.apple.com/batteries/maximizing-performance/:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings > Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p>Background Activity. This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"> • To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings > General > Background App Refresh and select Wi-Fi, Wi-Fi & Cellular Data, or Off to turn off Background App Refresh entirely. • If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings > Accounts & Passwords > Fetch New Data.  <p>; https://developer.apple.com/documentation/avfoundation/avplayer; https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback; https://support.apple.com/en-us/HT207122; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence; https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time; https://developer.apple.com/documentation/backgroundtasks; https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks;</p>

Claim	Public Documentation
	<p>https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/; https://developer.apple.com/documentation/backgroundtasks https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask; https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask; https://developer.apple.com/documentation/backgroundtasks/bgtask; https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/.</p>
<p>7. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify an intention to launch or start the first software component.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify an intention to launch or start the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise identifying an intention to launch or start the first software component. <i>See, e.g.</i>, https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate:</p>

Claim	Public Documentation
	<p>Instance Property</p> <h2>applicationState</h2> <p>The app's current state, or that of its most active scene.</p> <div> iOS 4.0+ iPadOS 4.0+ Mac Catalyst 13.1+ tvOS 9.0+ visionOS 1.0+ Beta </div> <pre>var applicationState: UIApplication.State { get }</pre> <hr/> <h2>Discussion</h2> <p>The behavior of this property depends on whether your app is scene-based.</p> <p>In a scene-based app, this property takes the value of the most active scene, which it determines from each scene's activationState property. A scene-based app launches in the background state, and transitions between its states as scenes connect, change their states, and disconnect. For scene-based apps, use UISceneDelegate to respond to changes in an individual scene's life cycle.</p> <p>In a sceneless app, the property's value is always the app's current state. The app is inactive at launch, and then is generally in either an active or background state. The app may become inactive for a short period — for example, when transitioning between active and background states, when the system presents an alert in front of it, or when the system displays the application switcher. For sceneless apps, use UIApplicationDelegate to respond to the app's life cycle changes.</p> <p>; https://developer.apple.com/documentation/uikit/app_and_environment/managing_your_app_s_life_cycle:</p>

Claim	Public Documentation
	<div><h1>Managing Your App's Life Cycle</h1><p>Respond to system notifications when your app is in the foreground or background, and handle other significant system-related events.</p></div> <div><h2>Overview</h2></div> <div><p>The current state of your app determines what it can and cannot do at any time. For example, a foreground app has the user's attention, so it has priority over system resources, including the CPU. By contrast, a background app must do as little work as possible, and preferably nothing, because it is offscreen. As your app changes from state to state, you must adjust its behavior accordingly.</p></div>



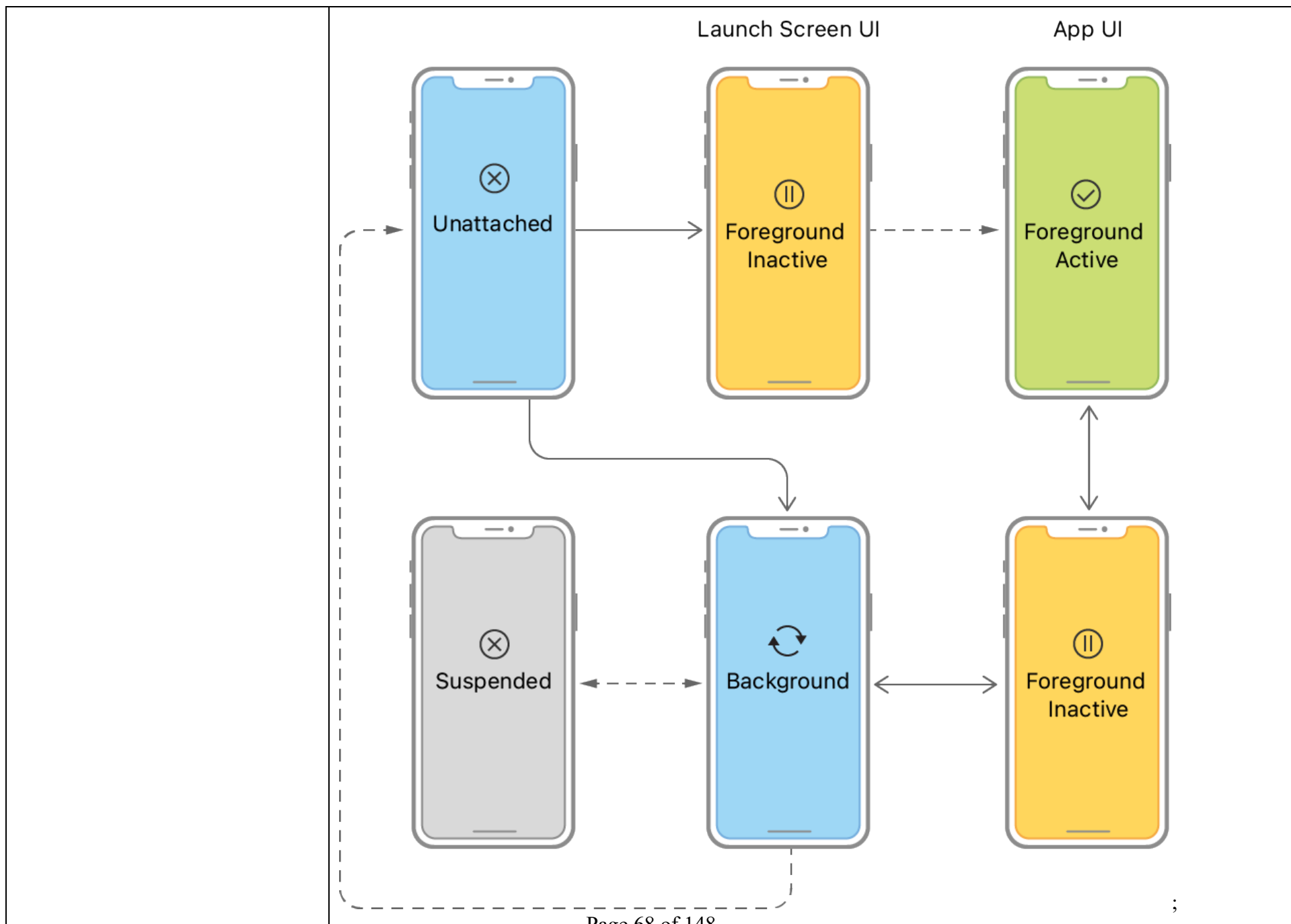
Claim	Public Documentation
	<p>veloper.apple.com/documentation/uikit/windows_and Screens/scenes/preparing_your_ui_to_run_in_the_foreground/:</p> <div><h2>Preparing Your UI to Run in the Foreground</h2><p>Configure your app to appear onscreen.</p></div> <h3>Overview</h3> <p>Use foreground transitions to prepare your app's UI to appear onscreen. An app's transition to the foreground is usually in response to a user action. For example, when the user taps the app's icon, the system launches the app and brings it to the foreground. Use a foreground transition to update your app's UI, acquire resources, and start the services you need to handle user requests.</p>

Claim	Public Documentation
	<p>Configure Your User Interface and Initial Tasks at Activation</p> <p>The system moves your app to the active state immediately before displaying the app’s UI. Activation is a good time to configure your app’s UI and runtime behavior; specifically:</p> <ul style="list-style-type: none"> • Show your app’s windows, if needed. • Change the currently visible view controller, if needed. • Update the data values and state of views and controls. • Display controls to resume a paused game. • Start or resume any dispatch queues that you use to execute tasks. • Update data source objects. • Start timers for periodic tasks. <p>Put your configuration code in one of the following methods:</p> <ul style="list-style-type: none"> • For a scene-based UI—The <code>sceneDidBecomeActive(_:)</code> method of the appropriate scene delegate object. • For all other apps—The <code>applicationDidBecomeActive(_:)</code> method of your app delegate object. <p>Activation is also the time to put finishing touches on your UI before displaying it to the user. Don’t run any code that might block your activation method. Instead, make sure you have everything you need in advance. For example, if your data changes frequently outside of the app, use background tasks to fetch updates from the network before your app returns to the foreground. Otherwise, be prepared to display existing data while you fetch changes asynchronously.</p>
<p>8. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify: an application identifier associated with the service usage activity or the first software component, an operating system function identifier associated with the service usage activity or the first software component, an aggregate service activity identifier, a component service activity identifier, or a combination of these.”</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify: an application identifier associated with the service usage activity or the first software component, an operating system function identifier associated with the service usage activity or the first software component, an aggregate service activity identifier, a component service activity identifier, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6.</p> <p>As a further example, the Accused Instrumentalities comprise application identifiers, processes, delegates, objects, scenes, task identifiers, etc. <i>See, e.g.</i>,</p>

Claim	Public Documentation
<p>service usage activity or the first software component, an aggregate service activity identifier, a component service activity identifier, or a combination of these.</p>	<p>https://developer.apple.com/help/account/manage-identifiers/register-an-app-id/:</p> <p>Manage identifiers</p> <h2>Register an App ID</h2> <p>An <i>App ID</i> identifies your app in a provisioning profile. It is a two-part string used to identify one or more apps from a single development team. There are two types of App IDs: an explicit App ID, used for a single app, and a wildcard App ID, used for a set of apps. The app capabilities enabled for an App ID serve as an allow list of the capabilities one or more apps may use. You can enable app capabilities when you create an App ID or modify these settings later. In-App Purchase is enabled by default for an explicit App ID. Beginning with Xcode 11.4, a single App ID can be used to build iOS, macOS, tvOS, and watchOS apps.</p> <p>Note: In order to configure the capabilities an app uses, you need to add them to a target in the Xcode project.</p>

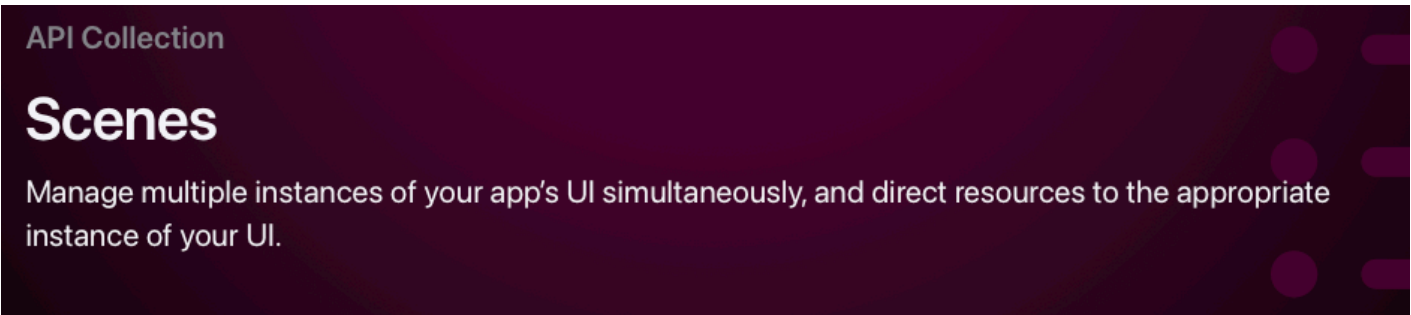
Claim	Public Documentation
	<ol style="list-style-type: none">1. In Certificates, Identifiers & Profiles, click Identifiers in the sidebar, then click the add button (+) on the top left.2. Select App IDs from the list of options and click continue.3. From the options, confirm App ID type is automatically selected, then click Continue.4. Enter a name or description for the App ID in the Description field.5. To create an explicit App ID, select Explicit App ID and enter the app's bundle ID in the Bundle ID field. The explicit App ID you enter here should match the bundle ID you entered in the target's Summary pane in Xcode.6. To create a wildcard App ID, select Wildcard App ID and enter a bundle ID suffix in the Bundle ID field.7. Select the corresponding checkboxes to enable the app capabilities you want to use. The capabilities available to your type of app and program membership appear under Capabilities. A checkbox is disabled if the technology requires an explicit App ID and you're creating a wildcard App ID, or the technology is enabled by default. Not all capabilities are eligible for all platforms.8. Click Continue, then review the registration information, then click Register. <p>; https://developer.apple.com/help/account/manage-identifiers/register-an-app-id-for-app-clips; https://developer.apple.com/help/account/manage-identifiers/register-a-services-id; https://developer.apple.com/help/account/manage-identifiers/register-an-app-group; https://developer.apple.com/help/account/manage-identifiers/create-an-icloud-container; https://developer.apple.com/documentation/uikit/app_and_environment/managing_your_app_s_life_cycle;</p>

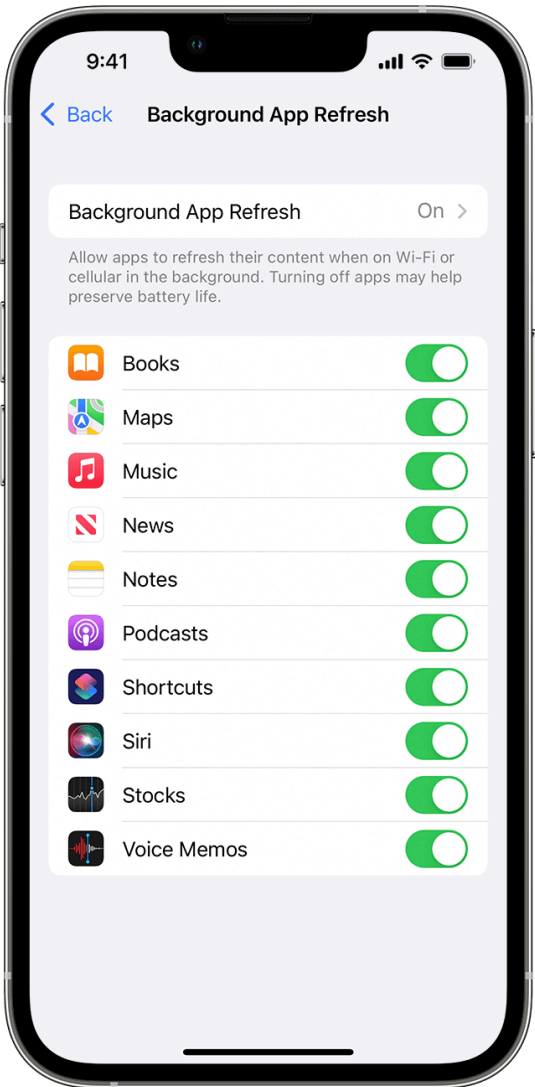
Claim	Public Documentation
	<div><h1>Managing Your App's Life Cycle</h1><p>Respond to system notifications when your app is in the foreground or background, and handle other significant system-related events.</p></div> <div><h2>Overview</h2></div> <div><p>The current state of your app determines what it can and cannot do at any time. For example, a foreground app has the user's attention, so it has priority over system resources, including the CPU. By contrast, a background app must do as little work as possible, and preferably nothing, because it is offscreen. As your app changes from state to state, you must adjust its behavior accordingly.</p></div>



Claim	Public Documentation
	<div>Article</div> <div><h2>Managing your app's life cycle</h2></div> <div><p>Respond to system notifications when your app is in the foreground or background, and handle other significant system-related events.</p></div> <div><h3>Overview</h3></div> <div><p>The current state of your app determines what it can and can't do at any time. For example, a foreground app has the user's attention, so it has priority over system resources, including the CPU. By contrast, a background app must do as little work as possible, and preferably nothing, because it's offscreen. As your app changes from state to state, you must adjust its behavior accordingly.</p></div> <div><p>When your app's state changes, UIKit notifies you by calling methods of the appropriate delegate object:</p></div> <div><ul style="list-style-type: none">• In iOS 13 and later, use <code>UISceneDelegate</code> objects to respond to life-cycle events in a scene-based app.• In iOS 12 and earlier, use the <code>UIApplicationDelegate</code> object to respond to life-cycle events.</div> <div><p>Note</p></div> <div><p>If you enable scene support in your app, iOS always uses your scene delegates in iOS 13 and later. In iOS 12 and earlier, the system uses your app delegate.</p></div> <div><p>https://developer.apple.com/documentation/uikit/uibackgroundtaskidentifier:</p></div>

Claim	Public Documentation
	<div><div>Structure</div><div><h2>UIBackgroundTaskIdentifier</h2><p>A unique token that identifies a request to run in the background.</p><div><div>iOS 4.0+</div><div>iPadOS 4.0+</div><div>Mac Catalyst 13.0+</div><div>tvOS 9.0+</div><div>visionOS 1.0+ Beta</div></div><div><pre>struct UIBackgroundTaskIdentifier</pre></div></div></div> <div><div>Topics</div><div><div>Identifier</div><pre>static let invalid: UIBackgroundTaskIdentifier</pre><p>A token that indicates an invalid task request.</p></div><div><div>Initializers</div><pre>init(rawValue: Int)</pre><p>Creates a new instance with the specified raw value.</p></div></div> <div>https://developer.apple.com/documentation/uikit/app_and_environment/scenes:</div>

Claim	Public Documentation
	 <p>API Collection</p> <h2>Scenes</h2> <p>Manage multiple instances of your app's UI simultaneously, and direct resources to the appropriate instance of your UI.</p> <h3>Overview</h3> <p>UIKit manages each instance of your app's UI using a <code>UIWindowScene</code> object. A scene contains the windows and view controllers for presenting one instance of your UI. Each scene also has a corresponding <code>UIWindowSceneDelegate</code> object, which you use to coordinate interactions between UIKit and your app. Scenes run concurrently with each other, sharing the same memory and app process space. As a result, a single app may have multiple scenes and scene delegate objects active at the same time.</p> <p>; https://developer.apple.com/documentation/bundleresources/information_property_list/bgtaskschedulerpermittedidentifiers.</p>
<p>9[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and at least one other software component, application, process, function, activity, or service, and wherein identify a service usage activity of the wireless end-user device comprises:</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and at least one other software component, application, process, function, activity, or service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8.</p> <p>As a further example, the Accused Instrumentalities comprise multiple software components, applications, processes, functions, activities, or services that result in service usage activities, such as the Settings App co-operating with Background App Refresh or Low Power Mode and/or one or more applications on a device resulting in service usage activities. <i>See, e.g.</i>, https://support.apple.com/en-us/HT202070:</p>

Claim	Public Documentation
	<div><h2>Use Background App Refresh</h2></div> <div><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div><p>If you want suspended apps to check for new content, go to Settings > General > Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div><p>; https://support.apple.com/en-us/HT205234:</p></div> <div></div>

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
9[b] identify a data flow to or from the at least one other software component, application, process, function, activity, or service; and	<p>The Accused Instrumentalities further “identify a data flow to or from the at least one other software component, application, process, function, activity, or service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8, and 9[a].</p>
9[c] associate the data flow with the first software component.	<p>The Accused Instrumentalities further “associate the data flow with the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8, and 9[a]-[b].</p>
10. The non-transitory computer-readable storage medium recited in claim 9, wherein the first software component comprises at least a portion of an application, and wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 9, wherein the first software component comprises at least a portion of an application, and wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, and 8-9.</p>
11. The non-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, and 8-9.</p>
12. The non-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity,	<p>The Accused Instrumentalities comprise “nonnon-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity, or service comprises a media service manager, an e-mail service manager, a domain name service (DNS) function, a software download service manager, a media download manager, a data download service manager, a media library function, a simple mail transfer protocol (SMTP) proxy, an Internet message access protocol (IMAP)</p>

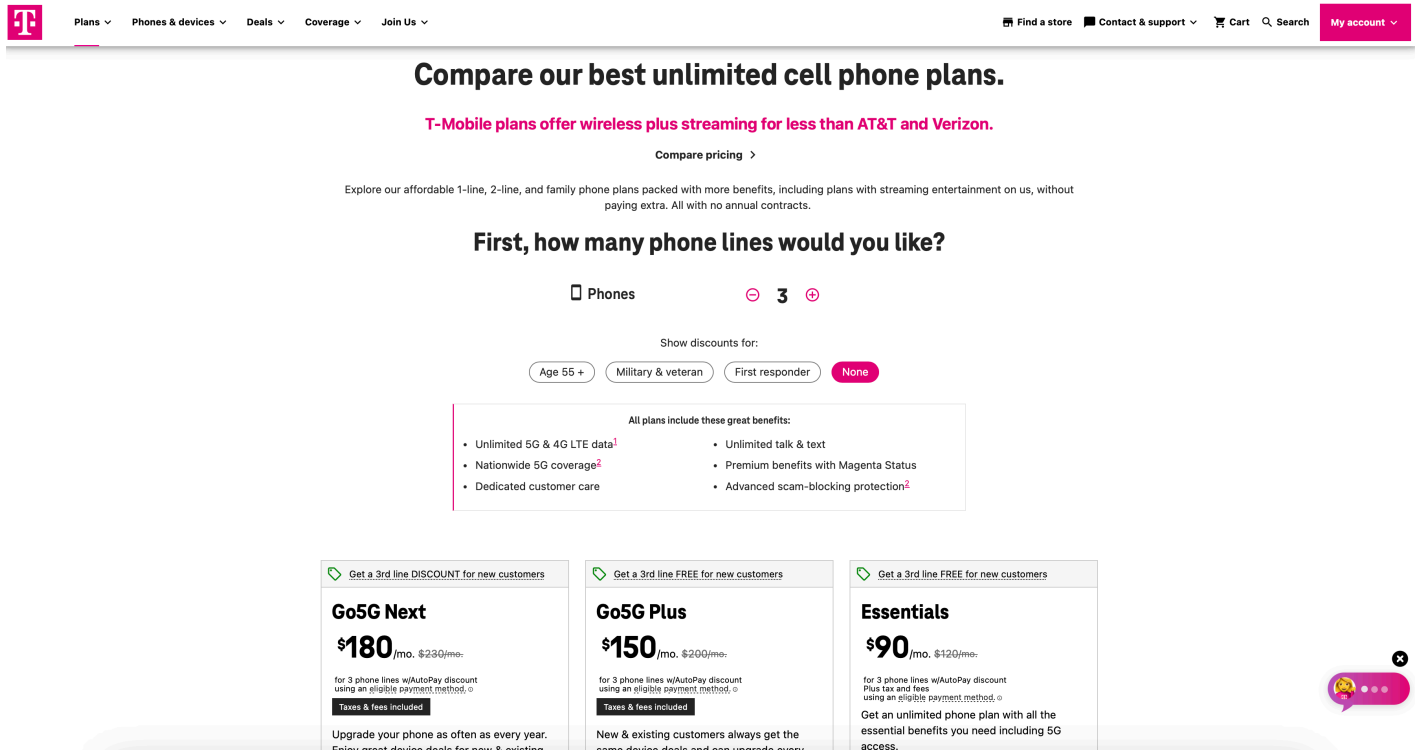
Claim	Public Documentation
<p>or service comprises a media service manager, an e-mail service manager, a domain name service (DNS) function, a software download service manager, a media download manager, a data download service manager, a media library function, a simple mail transfer protocol (SMTP) proxy, an Internet message access protocol (IMAP) proxy, a post office protocol (POP) proxy, a hypertext transfer protocol (HTTP) proxy, an instant messaging (IM) proxy, a virtual private network (VPN) service manager, or a secure socket layer (SSL) proxy.</p>	<p>proxy, a post office protocol (POP) proxy, a hypertext transfer protocol (HTTP) proxy, an instant messaging (IM) proxy, a virtual private network (VPN) service manager, or a secure socket layer (SSL) proxy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9, as well as the following exemplary citations: https://developer.apple.com/documentation/networkextension/dns_settings; https://developer.apple.com/documentation/avfoundation/avplayer; https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback; https://developer.apple.com/documentation/devicemanagement/mail; https://developer.apple.com/documentation/security/secure_transport/using_the_secure_socket_layer_for_network_communication; https://developer.apple.com/documentation/networkextension/personal_vpn; https://developer.apple.com/documentation/foundation/nsproxy; https://developer.apple.com/documentation/messages.</p>
<p>13[a]. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
<p>13[b] monitor an application proxy service flow; and</p>	<p>The Accused Instrumentalities further “monitor an application proxy service flow.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
<p>13[c] classify the application proxy service flow as being initiated by or belonging to the first software component.</p>	<p>The Accused Instrumentalities further “classify the application proxy service flow as being initiated by or belonging to the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>

Claim	Public Documentation
14[a]. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
14[b] associate an identifier identifying the first software component with a request to a proxy service;	<p>The Accused Instrumentalities further “associate an identifier identifying the first software component with a request to a proxy service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
14[c] associate the request to the proxy service with a traffic flow, the traffic flow comprising the service usage activity; and	<p>The Accused Instrumentalities further “associate the request to the proxy service with a traffic flow, the traffic flow comprising the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
14[d] associate the traffic flow with the identifier.	<p>The Accused Instrumentalities further “associate the traffic flow with the identifier.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
15. The non-transitory computer-readable storage medium recited in claim 14, wherein the identifier comprises a name, a fingerprint, an identification tag, a process number, or a credential.	<p>The Accused Instrumentalities further “non-transitory computer-readable storage medium recited in claim 14, wherein the identifier comprises a name, a fingerprint, an identification tag, a process number, or a credential.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
16[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and a proxy function, and wherein identify a service usage activity of the wireless end-user device comprises.”	<p>The Accused Instrumentalities comprises “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and a proxy function, and wherein identify a service usage activity of the wireless end-user device comprises.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>

Claim	Public Documentation
ware component and a proxy function, and wherein identify a service usage activity of the wireless end-user device comprises:	
16[b] identify a data flow to or from the proxy function; and	The Accused Instrumentalities further “identify a data flow to or from the proxy function.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.
16[c] associate the data flow with the first software component.	The Accused Instrumentalities further “associate the data flow with the first software component.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.
17. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify the service usage activity based on a stream, a flow, a destination, a port, a packet inspection, or a combination of these.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify the service usage activity based on a stream, a flow, a destination, a port, a packet inspection, or a combination of these.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.
18. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises determine an identifier associated with the first software component, a number associated with the first software component, a name associated with the first software component, or a signature associated with the first software component.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises determine an identifier associated with the first software component, a number associated with the first software component, a name associated with the first software component, or a signature associated with the first software component.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.

Claim	Public Documentation
ciated with the first software component, or a signature associated with the first software component.	
19. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application on the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application on the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
20. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises an operating system component, function, or service.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises an operating system component, function, or service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
21. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a software function, utility, process, or tool.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a software function, utility, process, or tool.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
22. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a plurality of applications, processes, functions, activities, or services.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a plurality of applications, processes, functions, activities, or services.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>

Claim	Public Documentation
23. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a Java archive (JAR) file, an application that uses an operating system (OS) function, an application that uses a proxy service function, or an OS process function that supports an application or OS function.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a Java archive (JAR) file, an application that uses an operating system (OS) function, an application that uses a proxy service function, or an OS process function that supports an application or OS function.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, and 14.</i></p>
24. The non-transitory computer-readable storage medium recited in claim 1, wherein the network element is communicatively coupled to the wireless end-user device over the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the network element is communicatively coupled to the wireless end-user device over the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, and 14.</i></p> <p>As a further example, the Accused Instrumentalities communicate with network elements. <i>See, e.g., See also, e.g.,</i> As a further example, the Accused Instrumentalities communicate with network elements. <i>See, e.g.,</i> https://www.t-mobile.com/cell-phone-plans:</p>

Claim	Public Documentation
	 <p>; https://www.t-mobile.com/cell-phone-plans/affordable-data-plans; https://www.t-mobile.com/cell-phone-plans/unlimited-55-senior-discount-plans?INTNAV=tNav:Plans:UnlimitedAge55; https://www.t-mobile.com/cell-phone-plans/military-discount-plans; https://www.t-mobile.com/cell-phone-plans/first-responder-discounts; https://www.t-mobile.com/home-internet/plans https://prepaid.t-mobile.com; https://www.t-mobile.com/cell-phone-plans/international-roaming-plans; https://www.t-mobile.com/support/coverage/domestic-roaming-data; https://www.t-mobile.com/customers/unlimited-roaming-sms-data; https://www.t-mobile.com/apps/t-mobile-app; https://www.t-mobile.com/apps/t-mobile-family-mode; https://www.t-mobile.com/support/devices/not-sold-by-t-mobile/byod-t-mobile-data-and-apn-settings; https://www.t-mobile.com/support/tutorials/device/apple/iphone-x/topic/connections-amp-network/apn-and-data-settings.</p>

Claim	Public Documentation
<p>25. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on an amount of time, a time of day, a day of a week, a schedule, a network busy state, a network performance state, a network quality-of-service state, a priority of the service usage activity, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on an amount of time, a time of day, a day of a week, a schedule, a network busy state, a network performance state, a network quality-of-service state, a priority of the service usage activity, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, and 24.</p> <p>As a further example, the Accused Instrumentalities comprise policies based on based on an amount of time, a time of day, a day of a week, a schedule, or a combination of one of these or other policies comprised in the exemplary citations found in claims 1-6, 8-9, 14, and 24. <i>See, e.g.</i> https://www.t-mobile.com/apps/t-mobile-app; https://www.t-mobile.com/apps/t-mobile-family-mode:</p>

Claim	Public Documentation
	<div><div><div>WIRELESS BUSINESS PREPAID INTERNET TV BANKING</div><div><div></div><div>Plans ▾ Phones & devices ▾ Deals ▾ Coverage ▾ Join Us ▾</div></div><div><div>Find a store</div><div>Contact & support ▾</div><div>Cart</div><div>Search</div><div>My account ▾</div></div></div><div><div><h1>Make digital parenting control easier with FamilyMode®.</h1></div><div><p>Add FamilyMode to your plan and supervise online habits across multiple devices, locate your family members with tracking, and more—all with an easy-to-use app. Just \$10/month.</p></div><div><div></div><div></div></div><div><p>Compatible Wi-Fi router req'd for some home devices. Get full terms</p></div></div><div><h2>Your ultimate app for digital protection.</h2></div><div><p>FamilyMode is a digital hub for online and real time safety for your whole family. It's ideal for online parental controls and keeping tabs on your family members virtually anywhere. FamilyMode has many features, including:</p></div><div></div><div><h3>Locate your kids</h3></div><div><p>Real-time location information helps you keep track of your family members and see where they've been.</p></div><div></div><div><h3>Monitor screen time.</h3></div><div><p>Understand how your family spends time online, and help them develop good digital habits.</p></div><div></div><div><h3>Set content filters.</h3></div><div><p>Use pre-set or custom filters to help ensure your kids only see age-appropriate content online.</p></div><div></div><div><h3>Manage internet use.</h3></div><div><p>Set time limits for your family, pause internet access, or give screen time as a reward.</p></div></div> <div><p>; https://www.t-mobile.com/support/devices/not-sold-by-t-mobile/byod-t-mobile-data-and-apn-settings; https://www.t-mobile.com/support/tutorials/device/apple/iphone-x/topic/connections-amp-network/apn-and-data-settings; https://www.t-mobile.com/support/plans-features/familymode-app;</p></div>

Claim	Public Documentation
	<div><h3>FamilyMode requirements</h3><ul style="list-style-type: none">• One parent must be a T-Mobile primary account holder to sign up and create profiles• FamilyMode's VPN must be enabled on a child's device for parental controls to work. If the child's device has low batteries, the VPN may stop operating which will impact performance• Current software versions supported:<ul style="list-style-type: none">• iOS version is 13.0 or greater• Android version is 9.0 or greater</div> <div><h3>First time setup</h3><div><div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Sign up for FamilyMode</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Log in on the parent device</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Create profiles for your family</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Add a device to the profile</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Multiple Admin Parents</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Restrict app deletion on a child device (iOS)</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Restrict app deletion on a child device (Android)</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Advanced Parental Controls</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div>Set up a lock code</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Recovering a lost or forgotten Lock Code</div></div></div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>+</div><div>Biometric login</div></div></div></div></div></div>

Manage internet usage

Changes to settings in the app may take up to five minutes to take effect. You can restart your device to have them take effect immediately











- + Set a Bedtime ▼
- + Set an Off Time ▼
- + Setting Time Limits ▼

Pause the internet

FamilyMode gives you the power to pause the whole network, individual family members, or even specific devices. In order to pause a whole wireless network or a device connected to Wi-Fi, you need to have the FamilyMode base station installed on your wireless network.

Pausing the internet may take up to 5 minutes on a child's device before the internet stops. Apps that do not require an internet connection, such as games, will not be impacted when the internet is paused.

- + Pause the whole family ▼
- + Pause a family member ▼
- + Pause a single device ▼

Claim	Public Documentation
	<p>Location & Safety Areas</p> <p>All devices must be running FamilyMode 3.2 or newer for all services to work.</p> <ul style="list-style-type: none">  Enable location sharing   Create a Safety Area   Check In   SOS Family Alert   Ring a lost device  <p>Send rewards</p> <p>Rewards are an easy way to send extra online time, and they expire at midnight, so whatever time you added goes back to normal on the following day. You can send as many Rewards as you'd like throughout the day.</p> <ol style="list-style-type: none"> Select a Profile from the home screen, then choose the star icon or select Rewards from the feature list. Pick the type of Reward you'd like to send: <ul style="list-style-type: none"> Extend a Time Limit Today Disable an Off Time Today Late Bedtime Tonight Set the Reward based on the existing settings, then select Send to finish.
<p>26. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a background service class, a background service state, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a background service class, a background service state, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
<p>27. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on at least an aspect of a service plan.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on at least an aspect of a service plan.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>28. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a behavior of the first software component, a behavior of the service usage activity, a messaging layer behavior, a random back-off, a power state of the wireless end-user device, a usage state of the wireless end-user device, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a behavior of the first software component, a behavior of the service usage activity, a messaging layer behavior, a random back-off, a power state of the wireless end-user device, a usage state of the wireless end-user device, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>29. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a user interaction with the first software component, a user interaction with the service usage activity, a user interaction with the wireless end-user device, a user interface priority of the service usage activity, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a user interaction with the first software component, a user interaction with the service usage activity, a user interaction with the wireless end-user device, a user interface priority of the service usage activity, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>30. The non-transitory computer-readable storage medium recited in claim 1, wherein the wireless</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the wireless end-user device is part of a device group, and wherein the policy is associated with the device group.”</p>

Claim	Public Documentation
end-user device is part of a device group, and wherein the policy is associated with the device group.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
31. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
32. The non-transitory computer-readable storage medium recited in claim 31, wherein the type of the wireless network is cellular, 2G, 3G, 4G, home, roaming, wireless fidelity (WiFi), or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 31, wherein the type of the wireless network is cellular, 2G, 3G, 4G, home, roaming, wireless fidelity (WiFi), or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
33. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a roaming condition of the wireless end-user device, a cost associated with communicating over the wireless network, or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a roaming condition of the wireless end-user device, a cost associated with communicating over the wireless network, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p> <p>For further example, the policy can be based on a roaming condition of the wireless end-user device, or a combination of a roaming condition and a cost associated with the plan used to communicate over the wireless network. <i>See, e.g.</i>, https://www.t-mobile.com/support/coverage/domestic-roaming-data:</p>

SUPPORT > COVERAGE

Domestic roaming data

Data works a little differently when connected outside the T-Mobile network in the U.S. T-Mobile continues to invest billions in expanding network coverage and improving its network speed and performance. In locations in the U.S. where we do not yet have network coverage, we partner with other networks.

On this page:

- [How it works](#)
- [How much domestic roaming data do you get?](#)
- [Check and reduce data use](#)
- [What happens when your domestic roaming data is used](#)
- [FAQs](#)

How it works

When you travel outside of T-Mobile's U.S. network areas, your phone automatically switches to use one of our wireless network partners where available when you have data roaming enabled.

- Check out [our map of the network and roaming areas](#).
- T-Mobile coordinates with these partners to give our customers connectivity outside of our network. T-Mobile does not charge an additional fee for this service, but because we do not own these networks, there are limitations to data use.
- There may be times when your device still attempts to roam on another U.S. wireless network, even when you're within the T-Mobile coverage area. If you'd like to limit this, try the tips to [reduce data usage](#).

How to know if you're roaming domestically

The best way to check your active network is to go into the phone settings and check for the mobile network or phone status options. The process varies by device, and you can find it in your user guide.

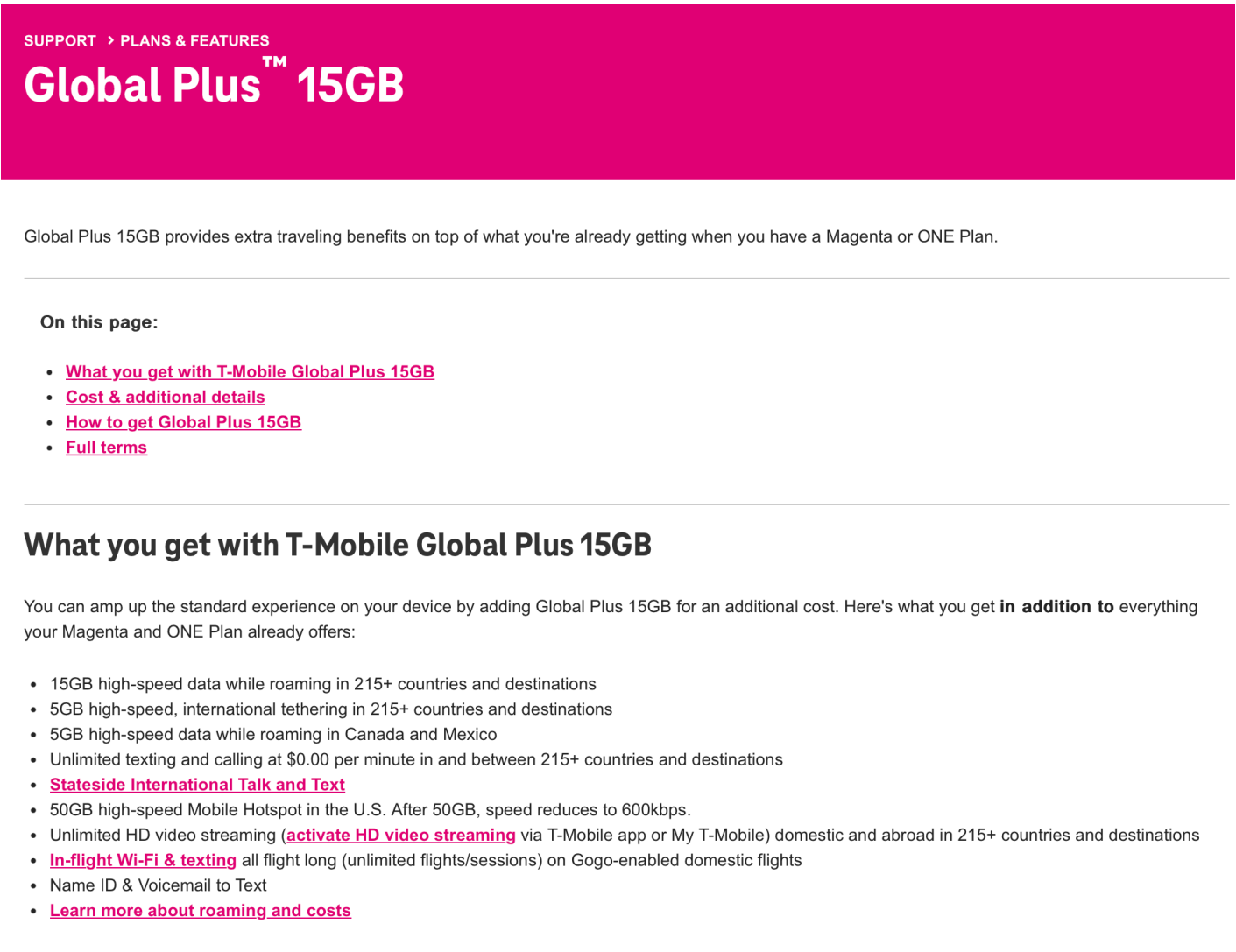
- When roaming on these networks, you'll receive free usage alerts via text message to alert you if you approach/reach your available domestic roaming data.
- You can review the [T-Mobile coverage map](#) prior to traveling to determine if your destination is within a T-Mobile or partner network area.

; <https://www.t-mobile.com/support/coverage/international-roaming-services>.

Claim	Public Documentation
<p>34. The non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises preventing the first software component from launching, executing, or running.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises preventing the first software component from launching, executing, or running.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>35. The non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies the first software component or the service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies the first software component or the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>36. The non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies a network parameter or a network type.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies a network parameter or a network type.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>37. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a usage limit or a threshold.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
<p>based on a usage limit or a threshold.</p>	<p>As a further example, the policy may be based on a usage limit or a threshold such as a limit of the amount of data available for a given plan. <i>See, e.g.</i>, claims 1-6, 8-9, 14, 24 and 25;</p> <p>; https://www.t-mobile.com/support/plans-features/data-speeds:</p> <p>T-Mobile Fair Usage commitment to on-device usage</p> <p>The T-Mobile Fair Usage commitment is how we ensure that the highest number of customers have the best possible experience for the most common uses on our network. The vast majority of customers on T-Mobile-branded and non-T-Mobile-branded, Sprint-branded, Metro by T-Mobile branded, and Assurance Wireless-branded plans receive higher priority than the small fraction of customers who are Heavy Data Users on their rate plan. For most T-Mobile-branded rate plans, a "Heavy Data User" is defined as a customer using more than 50GB of data in a billing cycle (100GB of data for new Magenta plans activated beginning February 24, 2021). The threshold number is periodically evaluated across our rate plans and brands to manage network traffic and deliver a good experience to all customers while offering a range of customer choices. You can always check the threshold amount for a rate plan by speaking with a representative, reviewing our rate cards or T-Mobile.com, or by logging in to T-Mobile.com or the T-Mobile app. The term "Heavy Data User" does not apply to customers on Magenta MAX, a new customer choice we are offering as we explore the expanding capacity of our 5G network, or on a small number of T-Mobile-branded business and government-oriented plans, which are not subject to a threshold.</p> <p>Review T-Mobile's Internet Disclosures for full details and FAQs.</p> <p>Older plans with data buckets</p> <p>If you're on an old T-Mobile plan without unlimited high-speed data, your data feature may have a threshold on how much full speed data you can use during a billing cycle. After you pass the threshold, you can still access an unlimited amount of data, but the speed is reduced.</p> <p>For example, a 2 GB data feature will provide 2 GB of full-speed access on the T-Mobile network. Once you use 2 GB of data, your data speed is reduced for the remainder of the bill cycle.</p> <p>If you want to have more high-speed data, please consider upgrading to a newer plan, Find the right plan for you.</p> <p>; https://www.t-mobile.com/support/plans-features/data-maximizer-for-prepaid-plans:</p>

Claim	Public Documentation
	<div>SUPPORT > PLANS & FEATURES</div> <div><h2>Prepaid data plans & passes</h2></div> <div><p>Learn more about data options for your T-Mobile Prepaid account.</p></div> <div><p>On this page:</p></div> <div><ul style="list-style-type: none">OverviewData passesData maximizer</div> <div><h3>Overview</h3></div> <div><ul style="list-style-type: none">Data varies by plan, to find out how much data you have used or have available, log in to your T-Mobile Prepaid account to check your usage.Understand and test T-Mobile Data Speeds.To prevent running out of data during the month, learn to manage dataSelect Prepaid plans can be used as a Smartphone Mobile Hotspot</div> <div><h3>Data passes</h3></div> <div><p>Pass options</p></div> <div><ul style="list-style-type: none">On-Demand data passes:<ul style="list-style-type: none">Temporarily add high-speed data to your account and can be added to extend your monthly available high-speed data.Once the high-speed data bucket is reached, unlimited data continues at reduced speeds. To continue service with high-speed data, another pass must be purchased.On-Demand passes can be purchased with refill cards or prepaid service account balances.One-Day HD Video Streaming passes:<ul style="list-style-type: none">May be available in the US on the T-Mobile network only.Prepaid HD Streaming passes do not have a resolution cap.HD streaming is not available when roaming in Canada, Mexico, or while roaming.</div> <div><p>; https://www.t-mobile.com/support/plans-features/global-plus-15gb:</p></div>

Claim	Public Documentation
	 <p>The screenshot shows the T-Mobile Global Plus 15GB support page. At the top, it says 'SUPPORT > PLANS & FEATURES' followed by 'Global Plus™ 15GB'. Below this, a paragraph states: 'Global Plus 15GB provides extra traveling benefits on top of what you're already getting when you have a Magenta or ONE Plan.' A section titled 'On this page:' lists four links: 'What you get with T-Mobile Global Plus 15GB', 'Cost & additional details', 'How to get Global Plus 15GB', and 'Full terms'. Another section titled 'What you get with T-Mobile Global Plus 15GB' contains a paragraph: 'You can amp up the standard experience on your device by adding Global Plus 15GB for an additional cost. Here's what you get in addition to everything your Magenta and ONE Plan already offers:' followed by a bulleted list of benefits: 15GB high-speed data while roaming in 215+ countries and destinations; 5GB high-speed, international tethering in 215+ countries and destinations; 5GB high-speed data while roaming in Canada and Mexico; Unlimited texting and calling at \$0.00 per minute in and between 215+ countries and destinations; Stateside International Talk and Text; 50GB high-speed Mobile Hotspot in the U.S. After 50GB, speed reduces to 600kbps; Unlimited HD video streaming (activate HD video streaming via T-Mobile app or My T-Mobile) domestic and abroad in 215+ countries and destinations; In-flight Wi-Fi & texting all flight long (unlimited flights/sessions) on Gogo-enabled domestic flights; Name ID & Voicemail to Text; and Learn more about roaming and costs.</p>
<p>38. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a limit, wherein the limit is based on the user input obtained through the user</p>

Claim	Public Documentation
<p>based on a limit, wherein the limit is based on the user input obtained through the user interface of the wireless end-user device, a user preference, an indication of a threshold, a total traffic, a type of traffic, a destination, a port, a frequency of access, an access behavior, or a combination of these.</p>	<p>interface of the wireless end-user device, a user preference, an indication of a threshold, a total traffic, a type of traffic, a destination, a port, a frequency of access, an access behavior, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>
<p>39. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the service usage activity, a priority of the service usage activity, a duration of the service usage activity, a characteristic of the wireless network, a quality-of-service (QoS) rule associated with the service usage activity, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the service usage activity, a priority of the service usage activity, a duration of the service usage activity, a characteristic of the wireless network, a quality-of-service (QoS) rule associated with the service usage activity, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>
<p>40. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy comprises one or more filters, wherein the one or more filters provide filtering based on: a characteristic of the wireless network, a service plan applicable to the wireless end-user device, a characteristic of the first software component, a time of day, a network</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy comprises one or more filters, wherein the one or more filters provide filtering based on: a characteristic of the wireless network, a service plan applicable to the wireless end-user device, a characteristic of the first software component, a time of day, a network busy state, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>

Claim	Public Documentation
<p>busy state, or a combination of these.</p>	
<p>41. The non-transitory computer-readable storage medium recited in claim 1, wherein the wireless network is a first wireless network, and wherein the service usage activity is a first service usage activity, and wherein the policy assists the one or more processors to control the first service usage activity when the wireless end-user device is connected to the first wireless network and refrain from controlling a second service usage activity when the wireless end-user device is connected to a second wireless network, the second service usage activity being associated with the first software component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the wireless network is a first wireless network, and wherein the service usage activity is a first service usage activity, and wherein the policy assists the one or more processors to control the first service usage activity when the wireless end-user device is connected to the first wireless network and refrain from controlling a second service usage activity when the wireless end-user device is connected to a second wireless network, the second service usage activity being associated with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>
<p>42. The non-transitory computer-readable storage medium recited in claim 41, wherein control the first service usage activity comprises prevent, restrict, or block the first service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 41, wherein control the first service usage activity comprises prevent, restrict, or block the first service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 37, and 41.</i></p>
<p>43. The non-transitory computer-readable storage medium recited in claim 1, wherein the second</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the second wireless network is a wireless fidelity (WiFi) network or a home network.”</p>

Claim	Public Documentation
wireless network is a wireless fidelity (WiFi) network or a home network.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
44. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a user is interacting with or has interacted with the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a user is interacting with or has interacted with the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
45. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a user interface foreground.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a user interface foreground.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
46. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is a software update.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is a software update.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>

Claim	Public Documentation
<p>47. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is or has been classified as being in a background state or the service usage activity is or has been classified as a background service.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is or has been classified as being in a background state or the service usage activity is or has been classified as a background service.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>48. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is identified by a list specifying one or more background activities.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is identified by a list specifying one or more background activities.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>49. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is a foreground activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is a foreground activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
50. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
51[a] The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
51[b] determine a classification of the service usage activity, and	<p>The Accused Instrumentalities further “determine a classification of the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
51[c] based on the classification of the service usage activity, determine whether the service usage activity comprises the background activity.	<p>The Accused Instrumentalities “based on the classification of the service usage activity, determine whether the service usage activity comprises the background activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
52. The non-transitory computer-readable storage medium recited in claim 51, wherein the classification of the service usage activity is based on: whether the first software component requires access to the wireless network, whether the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 51, wherein the classification of the service usage activity is based on: whether the first software component requires access to the wireless network, whether the one or more prospective or successful communications over the wireless network comprise an update to the first software component, whether the first software component requires information about the wireless network, whether the first software component requires location information, whether the one or more prospective or successful communications over the wireless network</p>

Claim	Public Documentation
<p>one or more prospective or successful communications over the wireless network comprise an update to the first software component, whether the first software component requires information about the wireless network, whether the first software component requires location information, whether the one or more prospective or successful communications over the wireless network comprise an operating system software update, whether the one or more prospective or successful communications over the wireless network comprise a security software update, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with a network-based back-up, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with an e-mail download, whether the one or more prospective or successful communications over the wireless network comprise communica-</p>	<p>comprise an operating system software update, whether the one or more prospective or successful communications over the wireless network comprise a security software update, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with a network-based back-up, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with an e-mail download, whether the one or more prospective or successful communications over the wireless network comprise communications associated with a cloud synchronization service, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 51.</i></p>

Claim	Public Documentation
<p>tions associated with a cloud synchronization service, or a combination of these.</p>	
<p>53. The non-transitory computer-readable storage medium recited in claim 51, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein determine a classification of the service usage activity is based on a characteristic of the first software component, a content type associated with the service usage activity, a characteristic of the wireless network, a service plan, a user preference, the first user input, a second user input, the information from the network element, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 51, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein determine a classification of the service usage activity is based on a characteristic of the first software component, a content type associated with the service usage activity, a characteristic of the wireless network, a service plan, a user preference, the first user input, a second user input, the information from the network element, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 51.</i></p>
<p>54. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity is based on a user interaction with the wireless end-user device.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 51, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein determine a classification of the service usage activity is based on a characteristic of the first software component, a content type associated with the service usage activity, a characteristic of the wireless network, a service plan, a user preference, the first user input, a second user input, the information from the network element, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
<p>55. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a value comprising a measure of the service usage activity satisfies a condition relative to a threshold.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a value comprising a measure of the service usage activity satisfies a condition relative to a threshold.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>56. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component or an unclassified component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component or an unclassified component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>57. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a foreground of user interaction or determine whether the first software component is in a background of user interaction.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a foreground of user interaction or determine whether the first software component is in a background of user interaction.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
58. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether content associated with the service usage activity is in a foreground of a user interface of the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether content associated with the service usage activity is in a foreground of a user interface of the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
59. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is active.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is active.”</p> <p><i>S See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
60. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in allowing, restricting, delaying, throttling, or preventing the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in allowing, restricting, delaying, throttling, or preventing the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
61. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in: blocking access to the wireless network, restricting access to the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in: blocking access to the wireless network, restricting access to the wireless network, delaying access to the wireless network, or aggregating and holding the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>

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wireless network, delaying access to the wireless network, or aggregating and holding the service usage activity.	
62. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in queuing, time-windowing, suspending, quarantining, killing, or removing the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in queuing, time-windowing, suspending, quarantining, killing, or removing the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
63. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in preventing an update associated with the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in preventing an update associated with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
64. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise one or more Internet protocol (IP) address requests, and wherein apply the policy comprises at least assist in withholding, delaying, time-windowing, reducing in frequency, or	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise one or more Internet protocol (IP) address requests, and wherein apply the policy comprises at least assist in withholding, delaying, time-windowing, reducing in frequency, or aggregating at least a portion of the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
aggregating at least a portion of the service usage activity.	
65. The non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises provide second information to the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises provide second information to the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
66. The non-transitory computer-readable storage medium recited in claim 65, wherein provide second information to the first software component comprises provide the second information through an application programming interface.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein provide second information to the first software component comprises provide the second information through an application programming interface.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.</i></p>
67[a] The non-transitory computer-readable storage medium recited in claim 65, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.</i></p>
67[b] provide third information to a second software component on the wireless end-user device, the	<p>The Accused Instrumentalities further “provide third information to a second software component on the wireless end-user device, the third information being different from the second information.”</p>

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third information being different from the second information.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.
68. The non-transitory computer-readable storage medium recited in claim 67, wherein provide third information to a second software component on the wireless end-user device comprises provide the third information through an application programming interface.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 67, wherein provide third information to a second software component on the wireless end-user device comprises provide the third information through an application programming interface.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 67.</p>
69. The non-transitory computer-readable storage medium recited in claim 67, wherein the third information enables the second software component to communicate over the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 67, wherein the third information enables the second software component to communicate over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 67.</p>
70. The non-transitory computer-readable storage medium recited in claim 65, wherein the wireless network is a first wireless network, and wherein the second information comprises a network access condition of the first wireless network, a network busy state associated with the first wireless network, a network availability state associated with the first wireless network, a network busy state associated with a second wireless network, a network availability	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein the wireless network is a first wireless network, and wherein the second information comprises a network access condition of the first wireless network, a network busy state associated with the first wireless network, a network availability state associated with the first wireless network, a network busy state associated with a second wireless network, a network availability state associated with the second wireless network, or information about the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 67.</p>

Claim	Public Documentation
state associated with the second wireless network, or information about the policy.	
71. The non-transitory computer-readable storage medium recited in claim 65, wherein the second information comprises a setting for assisting the first software component in restricting, allowing, blocking, throttling, deferring, time-scheduling, or queuing the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein the second information comprises a setting for assisting the first software component in restricting, allowing, blocking, throttling, deferring, time-scheduling, or queuing the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.</p>
72. The non-transitory computer-readable storage medium recited in claim 71, wherein the setting is based on a characteristic of the wireless network, a network busy state associated with the wireless network, a time, a service plan associated with the wireless end-user device, a classification of the service usage activity, or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 71, wherein the setting is based on a characteristic of the wireless network, a network busy state associated with the wireless network, a time, a service plan associated with the wireless end-user device, a classification of the service usage activity, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 71.</p>
73. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the first software component is allowed to access the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the first software component is allowed to access the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>

Claim	Public Documentation
74. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the wireless network is available.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the wireless network is available.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
75. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component of a traffic control to be implemented or applied by the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component of a traffic control to be implemented or applied by the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
76. The non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises obtain second information from the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises obtain second information from the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
77. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification associated with the first software component or the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification associated with the first software component or the service usage activity, the notification for presentation through a user interface of the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

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service usage activity, the notification for presentation through a user interface of the wireless end-user device.	As a further example, the Accused Instrumentalities cause a notification to be presented to a user. <i>See, e.g.</i> , https://support.apple.com/en-us/HT205234 :

Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

- 5G (except for video streaming) on iPhone 12 and iPhone 13 models¹
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display²
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

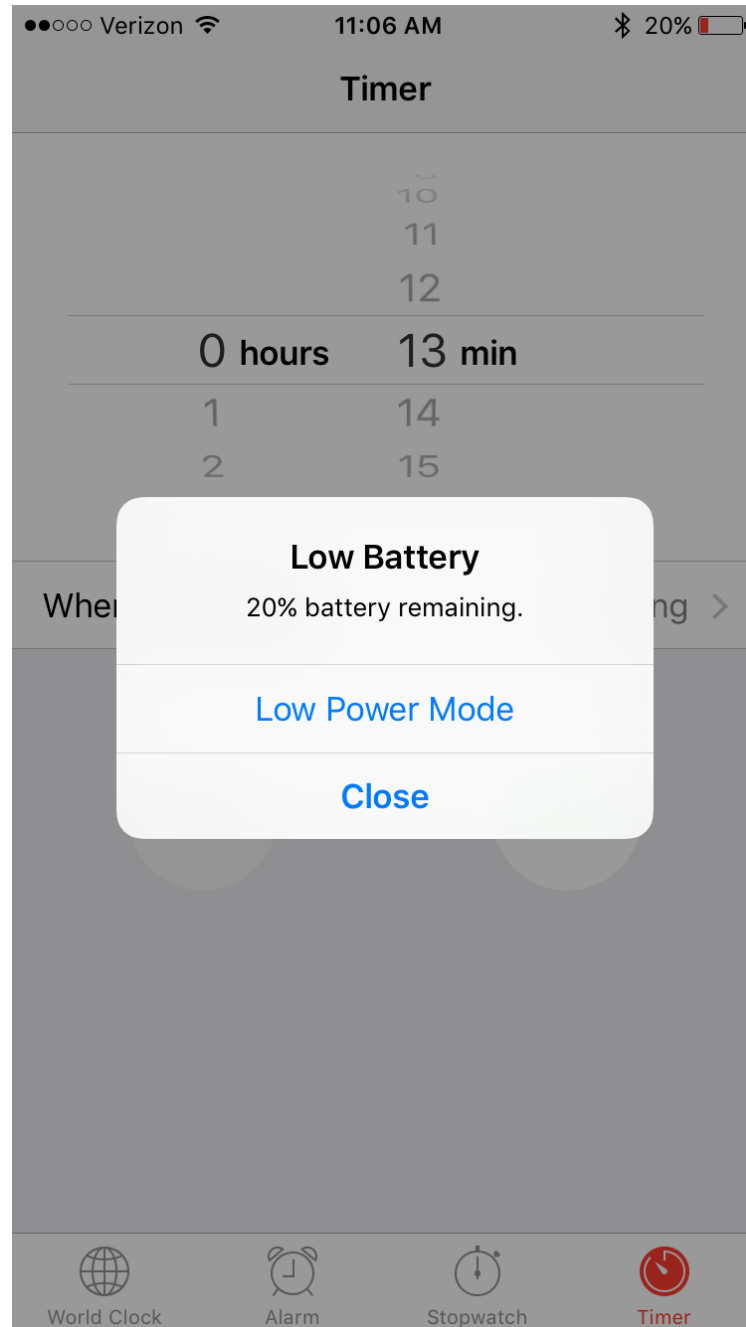
When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

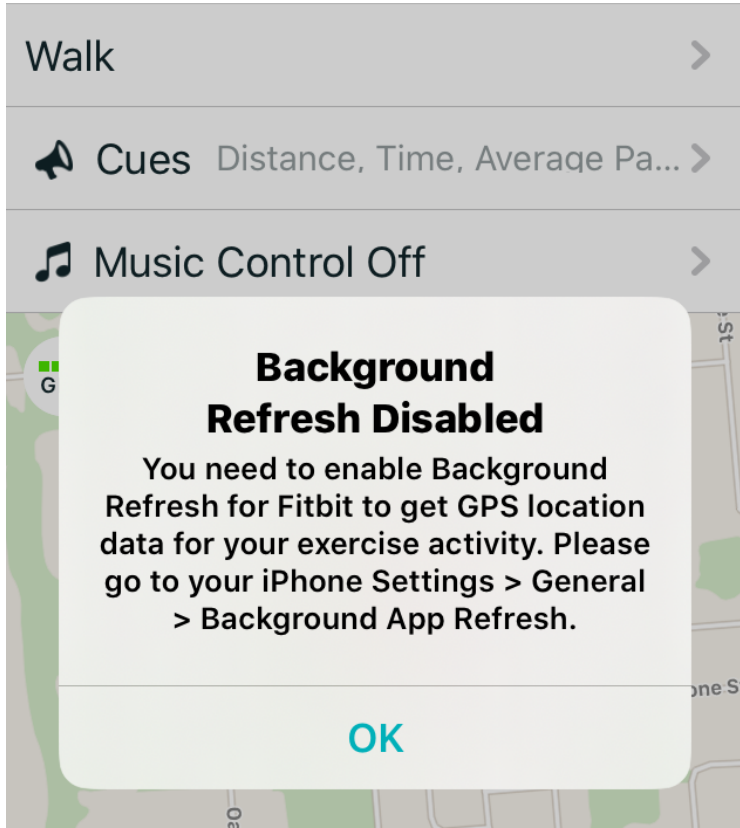


1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
	<p>; https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus:</p> <p>Instance Property</p> <h2>backgroundRefreshStatus</h2> <p>Indicates whether the app can refresh content when running in the background.</p> <div><div>iOS 7.0+</div><div>iPadOS 7.0+</div><div>Mac Catalyst 13.1+</div><div>tvOS 11.0+</div><div>visionOS 1.0+ Beta</div></div> <pre>var backgroundRefreshStatus: UIBackgroundRefreshStatus { get }</pre> <hr/> <h2>Discussion</h2> <p>You can use this property to determine whether Background App Refresh—an app's ability to open in the background to perform refresh tasks—is enabled, and warn the user if it is not. Don't warn the user if the value of this property is set to <code>UIBackgroundRefreshStatus.restricted</code>. A restricted user, such as one who is managed under parental controls, can't enable Background App Refresh.</p> <p>Background App Refresh is disabled automatically when a device is operating in low-power mode. When this happens, the time available for performing background tasks is reduced to save power.</p> <p>https://support.apple.com/en-us/HT213336; <i>see also</i> exemplary screenshots:</p>



Claim	Public Documentation
	
<p>78. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification for presentation</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification for presentation through a user interface of the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>

Claim	Public Documentation
through a user interface of the wireless end-user device.	
79. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting a stack application programming interface (API) level or application messaging layer request.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises obtain second information from the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
80. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in killing or suspending the service usage activity or the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in killing or suspending the service usage activity or the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, and 14.</i></p>
81. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in changing or setting a priority of the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in changing or setting a priority of the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
82. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in emulating a network application	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in emulating a network application programming interface (API) message.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

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programming interface (API) message.	
83. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, modifying, blocking, removing, injecting, swapping, or replacing an application interface message.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, modifying, blocking, removing, injecting, swapping, or replacing an application interface message.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
84[a] The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
84[b] at least assist in preventing initiation of the service usage activity by the first software component; and	<p>The Accused Instrumentalities further comprise “at least assist in preventing initiation of the service usage activity by the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
84[c] send a message to the first software component.	<p>The Accused Instrumentalities further comprise “send a message to the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
85. The non-transitory computer-readable storage medium recited in claim 84, wherein initiation of the service usage activity by the first software component comprises opening of a connection, opening of a socket, initiating	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 84, wherein initiation of the service usage activity by the first software component comprises opening of a connection, opening of a socket, initiating transmission, initiating a data flow, or initiating a data stream.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

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transmission, initiating a data flow, or initiating a data stream.	
86. The non-transitory computer-readable storage medium recited in claim 84, wherein the message comprises a reset message, an indication that the service usage activity is not allowed, or an indication that the wireless network is not available.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 84, wherein the message comprises a reset message, an indication that the service usage activity is not allowed, or an indication that the wireless network is not available.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
87[a] The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
87[b] identify a socket to be opened for the service usage activity; and	<p>The Accused Instrumentalities further “identify a socket to be opened for the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
87[c] based on a condition, block the service usage activity or terminate the socket.	<p>The Accused Instrumentalities “based on a condition, block the service usage activity or terminate the socket.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
88. The non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises: blocking a network access event or attempt associated with the first software component, modulating a	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises: blocking a network access event or attempt associated with the first software component, modulating a number of access events or attempts associated with the first software component, aggregating a plurality of access events or attempts associated with the first software component, or time-windowing the number of access events or attempts associated with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

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<p>number of access events or attempts associated with the first software component, aggregating a plurality of access events or attempts associated with the first software component, or time-windowing the number of access events or attempts associated with the first software component.</p>	
<p>89[a] The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>89[b] if it is determined that the service usage activity is not the background activity, refrain from applying the policy.</p>	<p>The Accused Instrumentalities further comprise “if it is determined that the service usage activity is not the background activity, refrain from applying the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>90[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the ma-</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

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chine-executable instructions further cause the one or more processors to:	
90[b] if it is determined that the service usage activity is not the background activity, apply a second policy.	<p>The Accused Instrumentalities further comprise “if it is determined that the service usage activity is not the background activity, apply a second policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
91. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises cause a notification to be presented through a user interface of the wireless end-user device.	<p>The Accused Instrumentalities further comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises cause a notification to be presented through a user interface of the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
92. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>
93. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>

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<p>94. The non-transitory computer-readable storage medium recited in claim 91, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to obtain an indication of a user response to the notification.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to obtain an indication of a user response to the notification.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
<p>95. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides a warning or an alert.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides a warning or an alert.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
<p>96. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a service plan limit.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a service plan limit.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
<p>97. The non-transitory computer-readable storage medium recited in claim 91, wherein the first software component is at least a portion of an application, and wherein the one or more prospective or successful communications over the wireless network comprise an attempt to launch, run, or execute the application, and wherein the</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the first software component is at least a portion of an application, and wherein the one or more prospective or successful communications over the wireless network comprise an attempt to launch, run, or execute the application, and wherein the notification comprises information about the attempt to launch, run, or execute the application.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>

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notification comprises information about the attempt to launch, run, or execute the application.	
98. The non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempted or successful launch or execution of the first software component, and wherein the notification comprises information about the attempted or successful launch or execution of the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempted or successful launch or execution of the first software component, and wherein the notification comprises information about the attempted or successful launch or execution of the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>
99. The non-transitory computer-readable storage medium recited in claim 91, wherein the policy is based on a limit, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to determine that a data usage associated with the service usage activity is not less than the limit, and wherein cause a notification to be presented through a user interface of the wireless end-user device comprises trigger presentation of the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the policy is based on a limit, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to determine that a data usage associated with the service usage activity is not less than the limit, and wherein cause a notification to be presented through a user interface of the wireless end-user device comprises trigger presentation of the notification based on the determination that the data usage associated with the service usage activity is not less than the limit.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>

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notification based on the determination that the data usage associated with the service usage activity is not less than the limit.	
100. The non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to download or load an application, and wherein the notification comprises information about the attempted download or load of the application.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to download or load an application, and wherein the notification comprises information about the attempted download or load of the application.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
101. The non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to initiate usage of a cloud-based service or application, and wherein the notification comprises information about the attempted initiation of usage of the cloud-based service or application.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to initiate usage of a cloud-based service or application, and wherein the notification comprises information about the attempted initiation of usage of the cloud-based service or application.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
102. The non-transitory computer-readable storage medium recited	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification indicates that one or more service usage activities are subject to the policy.”</p>

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in claim 91, wherein the notification indicates that one or more service usage activities are subject to the policy.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.
103. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a second network.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a second network.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.
104. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification comprises an offer for a service plan upgrade or downgrade.	The Accused Instrumentalities comprise “-transitory computer-readable storage medium recited in claim 91, wherein the notification comprises an offer for a service plan upgrade or downgrade.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.
105. The non-transitory computer-readable storage medium recited in claim 91, wherein apply the policy further comprises obtain an indication of a user preference in response to the notification.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein apply the policy further comprises obtain an indication of a user preference in response to the notification.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.
106. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to associate the policy with a second software component.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to associate the policy with a second software component.” <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.

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107. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow or block the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow or block the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</i></p>
108. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference identifies a traffic control setting associated with the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference identifies a traffic control setting associated with the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</i></p>
109. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow the service usage activity under a specified condition.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow the service usage activity under a specified condition.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</i></p>
110. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to override or modify the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to override or modify the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</i></p>
111. The non-transitory computer-readable storage medium recited in claim 91, wherein cause a notification to be presented through a	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein cause a notification to be presented through a user interface of the wireless end-user device comprises cause the notification to be presented based on occurrence of a trigger.”</p>

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user interface of the wireless end-user device comprises cause the notification to be presented based on occurrence of a trigger.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.
112. The non-transitory computer-readable storage medium recited in claim 111, wherein the trigger is: a measure of the service usage activity satisfies a first condition relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 111, wherein the trigger is: a measure of the service usage activity satisfies a first condition relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 111.</p>
113. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
114. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including the service usage activity or the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>

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the service usage activity or the first software component.	
115. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an option to modify the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an option to modify the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
116. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an indication of a measure of usage of the wireless network associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an indication of a measure of usage of the wireless network associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
117. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
118[a] The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>

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118[b] cause a notification to be presented through a user interface of the wireless end-user device.	<p>The Accused Instrumentalities further “cause a notification to be presented through a user interface of the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
119. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>
120. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>
121. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification indicates that the service usage activity is the background activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification indicates that the service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>
122. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about a second network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about a second network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>

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<p>123. The non-transitory computer-readable storage medium recited in claim 118, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to obtain an indication of a user preference in response to the notification.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to obtain an indication of a user preference in response to the notification.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</i></p>
<p>124. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to associate the policy with the first software component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to associate the policy with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, 118, and 123.</i></p>
<p>125. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to restrict, allow, or block the service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to restrict, allow, or block the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, 118, and 123.</i></p>
<p>126. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference identifies a traffic control setting associated with the policy.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference identifies a traffic control setting associated with the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</i></p>

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127. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to override or modify the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to override or modify the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
128. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user acknowledgment of the notification.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user acknowledgment of the notification.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
129. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference indicates one or more network types.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference indicates one or more network types.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
130. The non-transitory computer-readable storage medium recited in claim 129, wherein the one or more network types comprise WiFi, 4G, 3G, wireless, wired, or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 129, wherein the one or more network types comprise WiFi, 4G, 3G, wireless, wired, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
131. The non-transitory computer-readable storage medium recited in claim 118, wherein cause a notification to be presented through a user interface of the wireless end-user device comprises cause the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein cause a notification to be presented through a user interface of the wireless end-user device comprises cause the notification to be presented based on occurrence of a trigger.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>

Claim	Public Documentation
notification to be presented based on occurrence of a trigger.	
132. The non-transitory computer-readable storage medium recited in claim 131, wherein the trigger is: a measure of the service usage activity satisfies a first condition relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 131, wherein the trigger is: a measure of the service usage activity satisfies a first condition relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 131.</p>
133. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>
134. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including the service usage activity or the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including the service usage activity or the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>

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135. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a setting associated with the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a setting associated with the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
136. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
137. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents an indication of a measure of usage of the wireless network associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
138. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a network busy state or a network availability state.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a network busy state or a network availability state.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
139. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents an indication of a measure of usage of the wireless	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents an indication of a measure of usage of the wireless network associated with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>

Claim	Public Documentation
network associated with the first software component.	
140. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a statistic associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a statistic associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
141. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
142. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with one or more networks, the one or more networks including the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with one or more networks, the one or more networks including the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
143. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing information associated with a service plan.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing information associated with a service plan.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>

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144. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
145. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a warning or an alert.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a warning or an alert.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
146. The non-transitory computer-readable storage medium recited in claim 118, wherein the information from the network element is first information, and wherein the notification is based on second information from the network element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the information from the network element is first information, and wherein the notification is based on second information from the network element.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
147. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises information about a cost or a charge associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises information about a cost or a charge associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
148. The non-transitory computer-readable storage medium recited	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises information about a service sponsor.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>

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in claim 118, wherein the notification comprises information about a service sponsor.	
149[a] The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>
149[b] detect an attempted use of the first software component; and	<p>The Accused Instrumentalities further “detect an attempted use of the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>
149[c] based on the detected attempted use of the first software component, cause a notification to be presented through a user interface of the wireless end-user device.	<p>The Accused Instrumentalities “based on the detected attempted use of the first software component, cause a notification to be presented through a user interface of the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>
150. The non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to override the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to override the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</p>

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<p>151. The non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information about a cost or a charge associated with the service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information about a cost or a charge associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</i></p>
<p>152. The non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to change or upgrade a service plan associated with the wireless end-user device.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to change or upgrade a service plan associated with the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</i></p>
<p>153. The non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of a policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input specifies a user preference associated with one or more network types.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of a policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input specifies a user preference associated with one or more network types.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</i></p>
<p>154. The non-transitory computer-readable storage medium recited in claim 153, wherein the one or more network types comprise wireless fidelity (WiFi), home,</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 153, wherein the one or more network types comprise wireless fidelity (WiFi), home, roaming, 4G, 3G, wireless, wired, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</i></p>

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roaming, 4G, 3G, wireless, wired, or a combination of these.	
155. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the policy is a first policy, and wherein the first user input or a second user input comprises a directive to apply a second policy to a second software component of the plurality of software components on the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the policy is a first policy, and wherein the first user input or a second user input comprises a directive to apply a second policy to a second software component of the plurality of software components on the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
156. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the first user input or a second user input comprises a directive to refrain from applying the policy to a second software component of the plurality of software components on the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the first user input or a second user input comprises a directive to refrain from applying the policy to a second software component of the plurality of software components on the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

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<p>157. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device comprises a directive to apply the policy to a second software component of the plurality of software components on the wireless end-user device.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device comprises a directive to apply the policy to a second software component of the plurality of software components on the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>158. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device specifies a user preference associated with the service usage activity or the first software component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device specifies a user preference associated with the service usage activity or the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>159. The non-transitory computer-readable storage medium recited in claim 158, wherein the user preference comprises a preference to restrict, allow, block, delay, or throttle the service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 158, wherein the user preference comprises a preference to restrict, allow, block, delay, or throttle the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>160[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the wireless network is a first wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p>

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the wireless network is a first wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.
160[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network; and	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
160[c] refrain from applying the policy to the second service usage activity.	<p>The Accused Instrumentalities further “refrain from applying the policy to the second service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
161[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the background activity is a first background activity, and wherein	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the background activity is a first background activity, and wherein the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

Claim	Public Documentation
<p>the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	
<p>161[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network; and</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>161[c] determine whether the second service usage activity is a second background activity;</p>	<p>The Accused Instrumentalities further “determine whether the second service usage activity is a second background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>161[d] if it is determined that the second service usage activity is the second background activity,</p>	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the second background activity, apply a second policy to the second service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

Claim	Public Documentation
apply a second policy to the second service usage activity.	
162. The non-transitory computer-readable storage medium recited in claim 161, wherein the first policy restricts or prevents the first background activity, and wherein the second policy allows the second background activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 161, wherein the first policy restricts or prevents the first background activity, and wherein the second policy allows the second background activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
163[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
163[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

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of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network; and	
163[c] apply a second policy to the second service usage activity.	<p>The Accused Instrumentalities further “apply a second policy to the second service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
164. The non-transitory computer-readable storage medium recited in claim 163, wherein the second policy comprises a control policy, a notification policy, or an accounting policy associated with the first software component or the second software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 163, wherein the second policy comprises a control policy, a notification policy, or an accounting policy associated with the first software component or the second software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
165[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the first wireless network, and wherein the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the first wireless network, and wherein the background activity is a first background activity, and wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

Claim	Public Documentation
background activity is a first background activity, and wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	
165[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
165[c] determine whether the second service usage activity is a second background activity; and	<p>The Accused Instrumentalities further “determine whether the second service usage activity is a second background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
165[d] if it is determined that the second service usage activity is the second background activity,	The Accused Instrumentalities “if it is determined that the second service usage activity is the second background activity, apply at least a portion of the policy, wherein the at least a portion of the policy is based on a second user input.”

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<p>apply at least a portion of the policy, wherein the at least a portion of the policy is based on a second user input.</p>	<p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>166[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>166[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

Claim	Public Documentation
communications over the wireless network;	
166[c] determine whether the second service usage activity is the background activity; and	<p>The Accused Instrumentalities further “determine whether the second service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
166[d] if it is determined that the second service usage activity is the background activity, refrain from applying at least a portion of the policy.	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the background activity, refrain from applying at least a portion of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
167[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the background activity is a first background activity, and wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the background activity is a first background activity, and wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

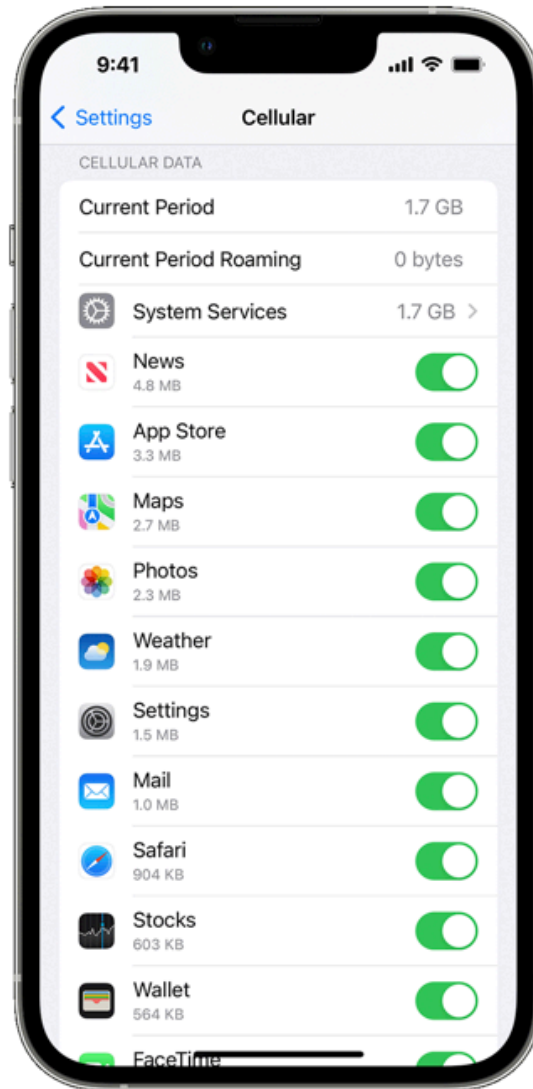
Claim	Public Documentation
<p>167[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>167[c] determine whether the second service usage activity is a second background activity;</p>	<p>The Accused Instrumentalities further “determine whether the second service usage activity is a second background activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>167[d] obtain a second policy, the second policy to be applied when the second service usage activity is the second background activity, the second policy for controlling the second service usage activity; and</p>	<p>The Accused Instrumentalities further “obtain a second policy, the second policy to be applied when the second service usage activity is the second background activity, the second policy for controlling the second service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>167[e] if it is determined that the second service usage activity is the second background activity, apply the second policy.</p>	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the second background activity, apply the second policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

Claim	Public Documentation
<p>168. The non-transitory computer-readable storage medium recited in claim 167, wherein the first policy, the second policy, or both are based on a network busy state, a network availability state, or a cost associated with the wireless network.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 167, wherein the first policy, the second policy, or both are based on a network busy state, a network availability state, or a cost associated with the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>169[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>169[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity com-</p>	<p>The Accused Instrumentalities comprise “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

Claim	Public Documentation
prising second one or more prospective or successful communications over the wireless network;	
169[c] determine whether the second service usage activity is the background activity; and	<p>The Accused Instrumentalities comprise “determine whether the second service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
169[d] if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.	<p>The Accused Instrumentalities comprise “if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
170. The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to monitor the service usage activity, account for the service usage activity, report information about the service usage activity, or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to monitor the service usage activity, account for the service usage activity, report information about the service usage activity, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p> <p>As a further example, the Accused Instrumentalities monitor, account for, and/or report information about service usage activities. <i>See, e.g.</i>, https://support.apple.com/en-us/HT201299:</p>

View how much data you're using

To see how much cellular data you've used, go to Settings > Cellular or Settings > Mobile Data. If you're using an iPad, you might see Settings > Cellular Data instead.



- Scroll down to find which apps are using cellular data. If you don't want an app to use cellular data, you can turn it off for that app. When cellular data is off, apps will use only Wi-Fi for data.
- To see the cellular data usage for individual System Services, go to Settings > Cellular or Settings > Mobile Data. Then tap System Services, in the list under Cellular Data. Cellular data can't be turned on or off for individual System Services.
- You can view the data-usage statistics for an app from a current period, or view app data statistics for apps that use data when you were roaming. To reset these statistics, go to Settings > Cellular or Settings > Mobile Data, and tap Reset Statistics.
- When you're using an iPhone with Dual SIM, you can see how much cellular data you've used with your selected cellular data number.

To get the most accurate cellular data usage from a current period, contact your carrier.

Claim	Public Documentation
171. The wireless end-user device embodying the non-transitory computer-readable storage medium recited in claim 1.	<p>The Accused Instrumentalities “embody[] the non-transitory computer-readable storage medium recited in claim 1.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p>
172. The non-transitory computer-readable storage medium recited in claim 1, wherein the network element comprises a service controller, a server, a cloud element, or a billing element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the network element comprises a service controller, a server, a cloud element, or a billing element.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
173. The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to provide information about the service usage activity to the network element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to provide information about the service usage activity to the network element.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
174[a] The non-transitory computer-readable storage medium recited in claim 173, wherein the information about the service usage activity comprises a count of data traffic associated with the service usage activity, a transaction	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 173, wherein the information about the service usage activity comprises a count of data traffic associated with the service usage activity, a transaction count, a message count, a connection time, a connection duration, a classification of traffic, an indication that a measure of the service usage activity satisfies a condition relative to a threshold, a parameter associated with the service usage activity, an indication that the background activity is restricted, or a combination of these.”</p>

Claim	Public Documentation
<p>count, a message count, a connection time, a connection duration, a classification of traffic, an indication that a measure of the service usage activity satisfies a condition relative to a threshold, a parameter associated with the service usage activity, an indication that the background activity is restricted, or a combination of these.</p>	<p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>
<p>174[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>
<p>174[c] determine whether the second service usage activity is the background activity; and</p>	<p>The Accused Instrumentalities further “determine whether the second service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>
<p>174[d] if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.</p>	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>

